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DEPARTMENT OF COMMERCE
National Oceanic and
Atmospheric Administration
National Marine Fisheries Service

Annual Report The Marine Mammal Protection Act of 1972

April 1, 1978 to March 31, 1979

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PHOTO CREDITS

Cover: Humpback whale, photo taken in Puerto Rico under a scientific research permit granted to David Mattila and Nathalie Randolph Ward.

Back: Elephant seals, photo taken at San Nicolas Island, Calif., by Douglas Beach under a scientific research permit granted to the Northwest Alaska Fisheries Center (NMFS), Seattle, Wash.

Annual Report The Marine Mammal Protection Act of 1972

April 1, 1978 to March 31, 1979

U.S. DEPARTMENT OF COMMERCE
Juanita M. Kreps, Secretary

National Oceanic and Atmospheric Administration
Richard A. Frank, Administrator

National Marine Fisheries Service
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THE SECRETARY OF COMMERCE
Washington, D.C. 20230

July 24, 1979

Dear Sirs:

It is my honor to transmit the Annual Report of the Department of Commerce on the Administration of the Marine Mammal Protection Act of 1972 for the period of April 1, 1978, through March 31, 1979, as required by Section 103(f) of the Act.

The Act makes the Department responsible for whales and porpoises of the Order Cetacea and seals and sea lions of the Suborder Pinnipedia. The enclosed report details the activities of the Department concerning these marine mammals.

Sincerely,

Juanita M. Kreps
Secretary of Commerce

Enclosure

President of the Senate
Speaker of the House

CONTENTS

Introduction..... 1
Summary - 1978-79 program..... 2
Part I - Marine Mammal activities April 1, 1978, to March 31, 1979. 4
Bowhead whales..... 4
Management..... 4
Research..... 5
Incidental take of porpoise..... 5
Management..... 5
Research..... 7
Dall porpoise..... 7
Marine mammals and commercial fisheries..... 8
Returning management of marine mammals to States..... 9
Alaska..... 9
California.....10
Oregon and Washington.....10
Cetacean program.....11
Gray whale.....11
Management.....11
Research.....12
Humpback whale.....12
Management.....12
Research.....12
Whale stock assessment.....12
Bottlenosed dolphins.....13
Pinniped program.....14
Hawaiian monk seal.....14
Management.....14
Research.....14
San Miguel Island, Calif.....14
Northern fur seal - Pribilof Islands.....15
Permits for public display and scientific research.....17
Application instructions.....17
Letters of agreement.....18
Collector of record.....18
MAMES.....18
Tanners and agents.....19
Beached and stranded marine mammals.....19
Marking and tagging.....19
Marine mammal observations.....21

International program.....21
International Whaling Commission.....21
Antarctic Living Marine Resources.....22
North Pacific Fur Seal Commission.....22
Inter-American Tropical Tuna Commission.....23
United States - Mexico discussions.....23
International North Pacific Fisheries Commission.....23
Convention on International Trade in Endangered Species of Wild Fauna and Flora.....24
Conference To Negotiate a New Convention on Cetacean Conservation.....24
U.S.-U.S.S.R. Marine Mammal Project.....24
Legal actions.....25
Law enforcement.....26
Funding.....28
Part II - Status of stocks.....29
Introduction.....29
Status reports.....30
Part III - Appendixes
A - Tables 1-3: Incidental take of marine mammals/commercial fishing operations
Tables 4-11: Scientific research and public display permits
B - Laws and treaties governing the protection of marine mammals
C - Federal Register notices and regulations

Captured spotted porpoise hang docilely in a purse seine net in a behavioral characteristic called rafting.

INTRODUCTION

More than 50 million years ago, some groups of mammals left land for a life in the sea. Their descendents are the marine mammals we know today, the dugongs, manatees, seals, sea lions, walruses, and whales. Some of these warmblooded, air-breathing animals that give birth to live young and nourish them with milk, enjoy healthy, stable populations. Others, especially the great whales, have been overexploited throughout the world.

Marine mammal conservation is not a new idea or practice in the United States. Passage of the Marine Mammal Protection Act of 1972 (the Act or MMPA), however, committed this nation to continuing long-term management and research programs to conserve and protect these animals. The Marine Mammal Protection Act imposed a moratorium on taking and importing marine mammals or their products, with exceptions, in the United States. The Act applies also to persons subject to U.S. jurisdiction on the high seas. In 1976, the Fishery Conservation and Management Act expanded U.S. control of marine mammals to include the 200-mile fishery conservation zone (FCZ).

The Act gave protection and management authority for oceanic marine mammals to the National Oceanic and Atmospheric Administration (NOAA), Department of Commerce (DOC). The National Marine Fisheries Service (NMFS), under NOAA, is the Federal government agency responsible for the order Cetacea (whales and porpoises) and the Suborder Pinnipedia (seals and sea lions), except walruses. The Act gave the Department of the Interior (DOI) responsibility for dugongs, manatees, polar bears, walruses, and sea otters. The moratorium does not apply to mammals already managed under international agreements, such as the northern fur seal. The Act does allow exceptions and waivers of the moratorium on taking and importing. Permits may be issued for scientific research, public display, and incidental catch of marine mammals. Alaska natives may take marine mammals for subsistence, and the Act may be waived to allow management of marine mammals to be returned to individual States.

Currently, the NMFS makes decisions on requests for waiving the moratorium, issues permits, carries out research programs, enforces provisions of the Act, publishes rules and regulations to manage marine mammals, cooperates with the States, participates in international activities and agreements, and maintains a close working relationship with the Marine Mammal Commission and its Committee of Scientific Advisors which were established by the Act. This annual report to Congress is available from the Washington, D.C., office of NMFS.

Summary - 1978-79 Program

Since 1972, we have increased our knowledge of marine mammals through research and management programs, and we have attempted to resolve many of the conflicts addressed by the Act.

In December 1977, the International Whaling Commission (IWC) imposed a quota, for the first time, on the number of bowhead whales that could be taken for subsistence by Alaska Eskimos. The quota set for 1978 led to an intensive research program by the United States. After a thorough population count, during the 1978 spring migration of bowhead whales, the population estimate was revised to 2,264, nearly double the previous estimated population of 1,300 animals. Based on the new estimate, the IWC agreed that in 1979, Alaska Eskimo subsistence hunters may kill 18 or strike 27 bowhead whales, whichever occurs first. No calves or adult females with calves may be taken. The IWC counts each whale landed as a strike.

An encouraging development during 1978 was the progress made in the reduction of porpoise mortality incidental to tuna fishing. In 6 years, the number of porpoise killed in association with purse seine fishing for yellowfin tuna has dropped almost 95 percent. During 1978, the estimated porpoise mortality by U.S. fishermen was less than 15,000, compared with 27,000 in 1977. The quota for 1978 was 51,945.

Also, 1978 was the first year of a cooperative 3-year Dall porpoise research program with Japan in the North Pacific Ocean. A Memorandum of Understanding was signed by Japan and the United States, who are parties to the International North Pacific Fisheries Commission (INPFC), to study the impact of the incidental take of marine mammals, especially Dall porpoise, by the Japanese high-seas salmon gillnet fishery.

In January 1979, the NOAA conditionally waived the moratorium and agreed to return management of seven species of marine mammals to the State of Alaska concurrent with a decision by the U.S. Fish and Wildlife Service for three other species. The State requested the waiver in 1973 after the Act placed a moratorium on the taking of marine mammals which preempted State management authority. Return of management will not be effective until Alaska has made certain changes in its laws and

regulations to make them consistent with the Act and the State program is approved by the Administrator of NOAA.

Improvements were made in processing public display and scientific research permits by using simplified application instructions, establishing a Collector of Record system for collecting animals from the wild, using Letters of Agreement for permanent placement of beached and stranded animals, and using computerized data to track and monitor applications and permits. Since 1973, NMFS has received 374 permit applications and resolved 364. Of these, 258 require continued monitoring,because the authority to take animals still exists or live animals remain in custody of the permit holder.

One of the most popular marine mammals requested by applicants for public display permits is the bottlenosed dolphin. To prevent possible overexploitation, NMFS will make aerial and tagging surveys to estimate the number of bottlenosed dolphins.

The rapidly growing number of persons who take part in whale watching around the Hawaiian Islands, where humpback whales winter from December through May, prompted NMFS to publish an interpretative policy on harassment of the humpback. These whales, which mate and give birth while in the warm Hawaiian waters, are disturbed by vessels, aircraft, swimmers, and divers.

NMFS is preparing a draft environmental impact statement on proposed critical habitat designation for the endangered Hawaiian monk seal. In March 1979, NMFS listed the Caribbean monk seal as endangered under the Endangered Species Act (ESA) of 1973.

A National Marine Mammal Laboratory was established in Seattle, Wash., to provide a national focus in addressing marine mammal problems and to fulfill U.S. commitments under international marine mammal agreements. The laboratory will be administered by the Northwest and Alaska Fisheries Center. Other NMFS marine mammal research programs take place at the Southwest Fisheries Center, La Jolla, Calif.; the Southeast Fisheries Center, Miami, Fla.; and the Northeast Fisheries Center, Woods Hole, Mass. Management programs are carried out at NMFS regional offices in Gloucester, Mass.; St. Petersburg, Fla.; Seattle, Wash.; Terminal Island, Calif.; and Juneau, Alaska.

PART I - MARINE MAMMAL PROGRAM

Bowhead Whale

Management

Before 1977, the International Whaling Commission (IWC) allowed a native subsistence harvest of bowhead whales without quotas; all other hunting of bowheads was prohibited. In 1977, in response to growing concern for the bowhead, the IWC removed that exemption and established a 1978 quota of 12 landed or 18 struck, whichever occurred first. During 1977, Alaska Eskimos landed 26 bowhead whales; an additional 82 were struck and lost. At that time, the bowhead population estimate was 1,300 animals.

The United States, responding to the IWC action, cooperated with Alaska Eskimos and other interested groups and established research, management, and weapons improvement programs. The results were published in "A Special Report to the International Whaling Commission: Bowhead Whales (U.S. Department of Commerce, NOAA, June 1978)." This report is available from the NMFS Washington, D.C., office.

Based upon observations made in spring 1978, the population of the stock of bowhead whales migrating past Alaska Eskimo whaling villages is in the range of 1,783 to 2,865 whales, with 2,264 bowheads considered the best estimate. The previous estimate of approximately 1,300 had been used by the IWC to establish the 1978 quota.

At the 30th Annual Meeting of the IWC, the U.S. Commissioner, who is the Administrator of NOAA, requested an increase, based on the higher population estimate, in the bowhead quota for the 1979 calendar year. The IWC increased the 1978 quota to 14 whales landed or 20 struck and set the 1979 quota at 18 whales landed or 27 struck, whichever occurred first.

Ten whales were landed and 15 were struck during the spring 1978 hunt. During the fall hunt, two whales were landed and one was struck and lost. The total harvest for calendar year 1978 was 12 whales landed and 18 struck, equal to the quota established in December 1977 and less than the quota established by the IWC in June 1978. Eskimo reporting officers acted as the primary contact between government agents and the whaling crews. These reporting officers and Alaskan Eskimo Whaling Commission (AEWC) representatives worked with NMFS agents daily to implement the management program. During the whaling season, an IWC observer from Greenland visited several of the whaling villages.

Regulations proposed in January 1979 to implement the new management program allocate the '79 quota among the nine Alaskan villages that take part in subsistence whaling, prohibit killing a calf or adult whale accompanied by a calf, grant licenses, and define prohibited acts. Draft and final supplemental environmental impact statements were prepared on this action and are available from the NMFS Washington, D.C., office.

Research

The Northwest Fisheries Center started an extensive 3-year bowhead whale research program in 1978 to provide a more accurate estimate of the Western Arctic population size, determine recruitment (birth rates) and natural mortality rates, describe distribution and migration routes, and evaluate the effect of the Eskimo harvest on this stock. Aerial and vessel surveys to determine the migratory and distribution patterns of the bowhead will be made. Counts of passing whales will be made from ice and land camps. Acoustic and sonar studies will be used to detect whales passing through the leads. The harvest will be monitored to obtain biological specimens. Historical commercial whaling records will be evaluated to estimate the earlier populations of bowheads.

Incidental Take of Porpoise

Management

Since passage of the Act, the number of porpoise killed in association with purse seine fishing for yellowfin tuna has dropped almost 95 percent; the estimated 1972 mortality was more than 300,000. As part of a 3-year management program, NMFS set quotas on the number of porpoises that could be taken in 1978, 1979, and 1980. During 1978, the estimated porpoise mortality caused by U.S. fishermen was less than 15,000 animals, compared with 27,000 in 1977.

The following table shows the observed reductions in porpoise mortality on U.S. vessels for the past 3 years and the quotas for 1979 and 1980.

Cumulative Porpoise Mortality

	Allowed quota	Annual estimate	Estimated kill per set	Estimated kill per ton
1976	78,000	104,000	12.00	0.90
1977	62,429	27,000	2.95	0.25
1978	51,945	15,000	4.03	0.36
1979	41,610			
1980	31,150			

The decline in porpoise mortality has been encouraging. A part of the 1978 reduction, however, is the result of fishing on an unusual abundance of school tuna, rather than tuna which associate with porpoise. Also, the 1977 fishing season was delayed several months. Although the total number of porpoise killed was reduced 45 percent between 1977 and 1978, the rate of mortality, that is the number of porpoises killed per set and the number killed for each ton of yellowfin tuna caught, increased 27 percent and 31 percent.

The Act requires commercial fishermen to have a permit if they cannot avoid taking marine mammals along with their intended catch. After the last of a series of 1-year permits for tuna purse seine fishing expired, a new 3-year permit was issued to the American Tunaboat Association beginning January 1, 1978. In addition to the annual porpoise quotas, the 3-year permit added new regulations that apply to tuna purse seine vessels.

The new regulations required large U.S. tuna purse seine vessels to install a porpoise apron in their existing fine-mesh porpoise release panels before they could receive a 1979 certificate to fish on porpoise. The porpoise (or Super) apron is a triangular section of fine-mesh webbing that is placed on top of another fine-mesh panel. The combination of the panel and apron acts as a chute and has been successful in allowing the porpoise to escape the tuna nets. The regulations also required the use of specific release procedures on each set involving porpoise, established a quota on the number in each individual porpoise stock that may be killed by the U.S. fleet during purse seining operations, and required other procedures designed to reduce porpoise mortality. The cumulative mortality of porpoises is closely monitored,and continual analysis is made of the kill rate by the U.S. fleet. A procedure has been developed to estimate cumulative kill by stock on a weekly basis. The regulations require an observer onboard each certified U.S. vessel for at least one trip per year from 1978 to 1980. Observers from the Southwest Region made 113 trips aboard tuna vessels in 1978 to record porpoise mortality and the performance of the required porpoise release gear and procedures. This represented 41 percent of the total trips by U.S. purse seiners in the Eastern Tropical Pacific Ocean (ETP).

Embargos on importing yellowfin tuna from countries that have purse seine vessels operating under their flag in the ETP have been relaxed with the exception of Peru (table 1 - Appendix). Each certified country, in order to avoid reimposition of the embargo, must show proof of installing new porpoise release gear aboard its flag seiners. NMFS closely monitors the degree of commitment shown by each country to reduce porpoise mortality by its purse seine fleets.

Research

Studies of oceanic porpoise populations and their relation to the tuna fishery form the primary marine mammal research program at the Southwest Fisheries Center.

Through an agreement among NMFS, the Marine Mammal Commission, and the U.S. Tuna Foundation, the tuna industry dedicated the purse seine vessel, the *QUEEN MARY*, for use as a research ship to study the behavior of porpoises and the effectiveness of porpoise release gear in 1978.

During two 50-day cruises aboard the dedicated vessel, methods to capture, hold, handle, and tag large groups of porpoise in their natural environment were evaluated as well as the effects of tags and marks on the animals. Use of the dedicated vessel made it possible to observe for the first time the overall performance of net dynamics, especially the backdown procedure. Scuba divers entered the net during three of the five cruises and were able to determine the cause of a backdown characteristic known as "stern sway," a major contributor to porpoise mortality. The information gained during these studies is essential to the development of techniques and gear to take full advantage of the backdown procedure.

During the vessel cruises, a thorough engineering assessment of the entire purse seine operation was begun that may lead to improvements that will reduce porpoise mortality. Data were collected through surface and underwater measurements that will allow testing and verification of existing theories describing fishing gear behavior. NMFS gear specialists are working with a contractor to develop a computer simulation of the purse seining process which will be used to study a wide range of fishing gear techniques.

Throughout the year, NMFS technicians supervised the manufacture and installation of the Super Apron in the nets of United States and foreign tuna purse seiners in San Diego, Panama, and Puerto Rico. Trial sets in local waters off San Diego were made to allow NMFS technologists to observe the underwater behavior of the net and identify the best tiedown points for backdown.

Dall Porpoise

In 1978, the first year of a 3-year cooperative research program was undertaken by scientists from the National Marine Mammal Laboratory and the Japanese Fisheries Agency to evaluate the effect upon the Dall porpoise population of the incidental take by the Japanese high-seas salmon gillnet fishery in the North Pacific Ocean and the Bering Sea. United States and Japanese scientists will be aboard Japanese

motherships to estimate rates of natural mortality and birth, total incidental take, and to determine the identity of Dall porpoise stocks on the fishing grounds. Scientists are making annual sighting surveys aboard Japanese salmon research vessels to estimate current abundance of the affected Dall porpoise population. Past incidental catch and salmon fisheries data are being analyzed. The acoustic characteristics of gill nets and of the Dall porpoise are being examined to identify gear modifications or techniques that might reduce incidental mortality. The research program is a result of a Memorandum of Understanding agreed to by Japan and the United States as parties to the International North Pacific Fisheries Commission (INPFC).

Marine Mammal - Commercial Fisheries

The Act established a general permit system to allow unavoidable takings of marine mammals caught in commercial fishing gear and to allow fishermen to protect their gear and catch from depredation caused by direct conflict with marine mammals. General permits were applied for by fishermen's associations or individuals representing large blocks of fishermen (e.g., salmon trollers or anchovy seiners). The general permit applications are reviewed in a process similar to that for research and public display permits. Once a general permit is issued, individual fishermen can apply for Certificates of Inclusion that allow marine mammals to be taken under the provisions of the general permit. General permits are issued annually to domestic fishermen.

In 1978, three general permits were issued to domestic fishing associations and five to foreign countries (Japan - 3, Russia - 1, Bulgaria - 1).

Tables 2 and 3 (Appendix) show the number of general permits applied for in 1977 and 1978, including the number of marine mammals requested and the number of marine mammals authorized to be taken.

The Fishery Conservation and Management Act of 1976 (FCMA) expanded the MMPA to include the U.S. 200-mile Fishery Conservation Zone and required foreign fishermen to obtain general permits to take marine mammals incidental to their fishing operations in the FCZ. The increased number of marine mammals requested to be taken under general permit fishing operations within U.S. jurisdiction emphasized the need for a review of the general permit system.

NMFS sponsored a workshop to update information on the status of marine mammals involved in commercial fishing operations. The workshop was designed to:

- identify all species or stocks of marine mammals involved in commercial fishing operations within the U.S. FCZ;

o review the best available scientific data and update estimates of the current population levels of those species or stocks;

o describe the degree of interaction between those species and domestic and foreign fishing operations within the FCZ, and assess the expected impact of the total take (death, injury, and/or harassment) on each species involved;

o develop estimates of the status of each species or stock compared to its optimum sustainable population as defined by NMFS;

o prepare a report summarizing the current population and OSP status estimates and the expected impact of the incidental take by fishermen within the FCZ; and

o describe additional research and data needed to provide increased reliability in the estimates of population levels, OSP levels, and impact of incidental taking stated in the report.

The workshop report will be used for general permit issuance decisions and possible modifications to the general permit system.

The FCMA requires the development of management plans for each fishery conducted in the FCZ that involves foreign participation. Each plan must assess the effect of proposed commercial fishing pressure on the entire marine environment. Plans are reviewed to assure the interests of marine mammals.

Returning Management of Marine Mammals to States

Alaska

The decision to return conditionally the management of seven species of marine mammals to Alaska was published January 9, 1979, concurrent with a decision by the U.S. Fish and Wildlife Service to return conditionally the management of three other species. The regulations stipulate that marine mammal management will be returned when Alaska revises its own laws and regulations to conform with the Act and with Federal rules. Changes in State laws and regulations will be subject to public review and comment before the Department of the Interior (DOI) and the Department of Commerce (DOC) give final approval to lifting the present ban.

In 1973, Alaska requested DOI and DOC to waive the Federal moratorium on taking these animals and return management authority to the State. Following lengthy public hearings on Alaska's request, the presiding administrative law judge issued in 1977 a "recommended decision" finding the State's request in accordance with the provisions and policies of

the Act. The judge recommended waiving the moratorium, with a limit on the numbers of animals taken annually, and returning management to the State. In March 1978, the two Departments forwarded to the Environmental Protection Agency the required final environmental impact statement.

Under the terms of the conditional waiver, annual limits are set on the taking of up to 6,648 northern sea lions; 10,511 land-breeding harbor seals; 5,700 largha seals; 20,000 ringed seals; 500 ribbon seals; 9,000 bearded seals; and 10 Cook Inlet stock and 350 Bering/Chukchi Sea stock beluga whales.

The Fish and Wildlife Service is responsible for the other mammals requested in the waiver...the polar bear, sea otter, and Pacific walrus.

In March 1978, NMFS and FWS received from the State of Alaska a research proposal on marine mammals. Implementing the program is contingent upon acceptance of the State's management program and available funds.

California

In 1977, the State of California indicated an interest in resuming management of marine mammals. In 1978, NMFS and the California Department of Fish and Game (CDFG) began planning an integrated Federal/State Coastal Marine Mammal Research and Management Program to fulfill some of the requirements of the Act. Initially, the program will evaluate and identify data required by the Act. The CDFG developed proposals for contract funding by NMFS to investigate the nature and extent of marine mammal/fishery interactions in California and to make Statewide censuses of California sea lions, northern sea lions, harbor seals, and northern elephant seals. The State research program is being considered for funding.

Oregon and Washington

NOAA is reviewing a joint research proposal submitted by the States of Washington and Oregon to study the harbor seal population of the Columbia River and adjacent bays and to determine the extent of marine mammal/fishery interactions.

A yearling gray whale loafing in kelp off Pt. Loma near San Diego, Calif.

Cetacean Program

Gray Whale

Management. In 1978, the IWC removed the gray whale from protected status, because the population had been restored to precommercial exploitation levels. Along with the increased abundance of gray whales, an increased number of people watch the gray whale's yearly migration along the Pacific coast. The Southwest Region (NMFS) surveyed the California coast and found commercial partyboat charters available for whale watching at ports from San Francisco to San Diego. NMFS will monitor whale watching along the coast and will continue to inform the public of the possible harm to whales from this activity.

Research. NMFS will cooperate with scientists from the Mexican Department of Fisheries in a 5-year research program to investigate the habitat needs of the gray whale and to monitor changes in abundance which may result from human use of coastal marine ecosystems. The program will (1) define baseline habitat needs in Laguna Ojo de Liebre and other lagoons in Baja California, (2) monitor population trends in the lagoons and from land stations at Monterey, Calif., and Unimak Island, Alaska, (3) investigate the degree of permanence of the population off Vancouver Island, Canada, in summer, and (4) analyze biological materials collected from the Soviet aboriginal catch.

Humpback Whale

Management. Almost 60 percent, or 500, of the entire North Pacific population of the humpback whale winter in the coastal waters off the main islands of Hawaii where they mate and return to give birth to their young after a gestation period of about 12 months. These marine giants have been slow to recover from years of overexploitation; only about 5 percent of their estimated original population exists today. To protect the humpback whale while it is near Hawaii from the rapidly growing numbers of persons who engage in whale watching, NMFS published a list of activities that are considered harassment.

A brochure on humpback whales published by the Western Pacific Program Office (NMFS) in cooperation with the Lahaina Restoration Foundation is available at NMFS offices in Honolulu, Hawaii; Terminal Island, Calif.; and Washington, D.C. The brochure lists the activities considered harassment under the Endangered Species Act and the Marine Mammal Protection Act.

Research. A study is underway to identify and describe the distribution, abundance, and migration patterns of the separate North Pacific stocks of humpback whales. Aerial and vessel censuses were made of the breeding and calving areas in Hawaiian waters and off Baja California. Population censuses and experimental radio taggings were undertaken in feeding areas in Southeastern Alaska waters and within Prince William Sound, Alaska. Whales in all areas were photographed for individual identification.

Whale Stock Assessment

Studies are being made of the status of whale stocks under IWC management jurisdiction to determine current population sizes so the effects of whaling can be assessed accurately. Scientists at the National Marine Mammal Laboratory are reviewing theory on the population and ecosystem dynamics of whales and are developing an automated retrieval system for whaling data from all ocean areas.

Bottlenosed Dolphins

The entertaining and easily trained bottlenosed dolphin is requested frequently by applicants for public display permits. To prevent this popular marine mammal from possible overexploitation, NMFS has started a three-part research program that will take place along the U.S. coast from North Carolina to Texas.

First, under supervision of the Southeast Fisheries Center, detailed aerial surveys will be made to gather population estimates of dolphins in these areas. Ground truth by boat (validation and confirmation of aerial surveys) will supplement the estimates for two of the areas. Surveys provide the data necessary to estimate how many dolphins there are and how many may be removed from their habitat without harming the stock.

Second, the biological characteristics (including age, sex, and movements) of local herds of dolphins will be examined to improve tagging techniques and to understand the structure and movements of dolphin herds.

Third, historical data records on live-capture of dolphins in the southeastern United States (before 1972) will be used to document past exploitation.

Pinniped Program

Hawaiian Monk Seal

Management. NMFS designated the Hawaiian monk seal as depleted in July 1976 under the MMPA. The species was listed as endangered under the ESA in November 1976. The Marine Mammal Commission recommended in December 1976 that a portion of the Hawaiian monk seal's range be considered for designation as critical habitat. At this time, NMFS is preparing a draft environmental impact statement that will evaluate critical habitat alternatives for the monk seal. Before preparation of the DEIS, NMFS assessed the monk seal's habitat requirements and worked closely with the State of Hawaii to develop alternatives. A recovery team (an ESA amendment requirement) for the Hawaiian monk seal will be operating by mid-1979.

Research. A long-term cooperative study of Hawaiian monk seal biology was started in 1976 by biologists at the National Marine Mammal Laboratory; the National Bird and Mammal Laboratory, FWS; and Marine Mammal Commission contract researchers. Surveys were made of the status and trends of the population, and a biology study was made at Laysan Island in 1977 and 1978. Recent censuses indicate most island populations have declined and total counts have decreased, on the average, 50 percent since the late 1950's. Monk seal populations at Kure, Midway, and Pearl and Hermes Reef have declined 70 to 90 percent in the same period. Lisianski and Laysan Island populations have declined 40 to 60 percent. Monk seal populations at French Frigate Shoals and Necker Island have increased during the same period.

During the 1978 season, substantial mortality was recorded in the Laysan Island population. Twenty-three dead animals were recovered, and censuses indicate that up to 50 animals were lost. Higher than normal mortality appeared to be restricted to Laysan Island, although six dead animals were found during a survey of French Frigate Shoals. Causes of the mortality remain unknown although considerable effort was made by biologists and specialists in pathology, bacteriology, virology, parasitology, and toxicology. The last remaining Hawaiian monk seal in captivity died in December 1978 at the Waikiki Aquarium, Honolulu, Hawaii.

San Miguel Island, Calif.

San Miguel Island is a unique habitat where six species of pinnipeds haul out, including the California sea lion, northern sea lion, northern fur seal, Guadalupe fur seal, harbor seal, and northern elephant seal. The Northwest and Alaska Fisheries Center has studied the population, biology, and behaviour of these marine mammals since the discovery of a

northern fur seal breeding colony at Adams Cove in 1968. The fur seal colony has grown each year, although the most dramatic increase has occurred since 1973. In 1977, 421 pups were born on the Adams Cove Rookery, and 635 pups were born in 1978. This growth represents the greatest single successive year increase in the pup population (50.8%) since studies of the colony began. The number of fur seal pups born on Castle Rock, a small islet 2 miles north of the west end of San Miguel Island, has also increased from 95 in 1972, the year of its discovery, to 533 in 1978.

The California sea lion population appears to have stabilized with 7,000 to 8,000 pups born each year from 1975 to 1978 (about a 20-percent increase from the early 1970's). The more abundant California sea lions compete with northern fur seals for rookery space, because both species pup and breed at the same time at both Adams Cove and Castle Rock. Studies of interactions between the two species suggest that the less abundant northern fur seal is slowly displacing the California sea lion, indicating that competition for space and food supplies may regulate these two populations at San Miguel.

Northern Fur Seal - Pribilof Islands

NMFS monitors the status and population of the northern fur seal herds on the Pribilof Islands and makes biological and ecological studies required by provisions in the Interim Convention for the Conservation of Northern Fur Seals. The treaty between Canada, Japan, the Soviet Union, and the United States enforces a conservation program that has allowed the fur seal populations to increase from a low of 300,000 animals in 1911 to a present-day population of 1.5 million.

As provided in the Convention, the United States annually harvests about 25,000 two- to six-year-old bachelor males. Neither females nor pups are taken in the commercial harvest. During recent years, a great deal of research has been done to assure that the method used to kill seals is the most humane possible. Both government-sponsored and private organizations have studied this subject, and many of their recommendations have been adopted. St. George Island, one of the two main Pribilof islands, has been established for an indefinite period as a nonharvest research control area for comparative studies with the harvested fur seal population on St. Paul Island.

By law, the United States is responsible for the Aleut residents of the islands who were brought there in 1786 by Russian explorers. The Alaska Native Claims Settlement Act of 1971 authorized the Aleuts to select approximately 94 percent of the total land area of St. Paul Island, and 97 percent of the total land area of St. George, including houses and surplus buildings. The selected land on St. George was conveyed to the Tanaq Corporation representing the residents of St. George on October

31, 1978. The land on St. Paul was transferred to the Tanadgusix Corporation January 18, 1979. The Federal government retained all fur seal rookeries, a buffer zone around the rookeries, and lands and buildings necessary to administer the island and manage the fur seal herds.

Northern fur seals on a rookery on St. Paul, one of the two main islands in the Pribilofs.

Permits for Public Display and Scientific Research

The use of marine mammals for research and public display is controlled by permit, Letter of Agreement, or other specific authorization. A major objective of the permit system is to ensure that the take of animals from the wild does not significantly affect the populations or the ecosystem they inhabit. A notice of permit applications, issuances, and modifications appears in the Federal Register.

In 1978, application instructions were revised, a Collector of Record system for collecting animals from the wild was established, and the use of Letters of Agreement for permanent placement of beached and stranded animals was increased. Permit data have been placed in a computerized Management Information System for Marine Mammals and Endangered Species (MAMES). During this 12-month reporting period, 57 applications were considered, 45 have been resolved, 9 Letters of Agreement were signed, and 28 modifications or amendments to permits were made.

The following table shows the number of permits and authorized take that required monitoring by NMFS during this period. It does not include those permits where take authorization has expired, unless live animals were taken.

	Scientific research	Public display	Scientific & display	Total
Permits Monitored	88	89	5	182
Cetaceans Authorized	438,334	178	263	438,775
Pinnipeds Authorized	57,269	237	0	57,506
Total Authorized	495,603	415	263	496,281

Application Instructions

Application instructions were revised to reduce the number of applications required when more than one type of activity is requested or where the same animal is covered by the Endangered Species Act or Fur Seal Act as well as the Marine Mammal Protection Act. As a result, eight types of permits issued by NMFS under the three Acts, including those combining research and display activities, can be requested in a single application. Additionally, the applicant may cite, rather than submit, duplicate information such as curriculum vitae, necropsy reports, and capture data which is already a part of the public record. The revised instructions allow for changes in information that will be required when the Department of Agriculture implements Proposed Standards and Regulations for the Humane Handling, Care, Treatment, and Transportation of Marine Mammals.

Letters of Agreement

Letters of Agreement have been an effective way to ensure that live marine mammals not covered by a permit are provided the same level of care and maintenance as required for animals covered by a permit. The increased number of rehabilitated beached and stranded animals has increased the need for this alternative.

Most Letters of Agreement involve placing or transferring animals to facilities under U.S. jurisdiction or facilities with valid permits. Their use is limited to beached or stranded and pre-Act animals, animals in captivity taken under permit, or animals under U.S. jurisdiction as a result of seizure. For transfer and placement of beached and stranded animals, the Letter of Agreement generally is entered into by the receiving facility and the local NMFS Regional Director. The usual permit conditions are made a part of these Agreements, and a satisfactory inspection of the holding facility is required. To date, 21 Agreements involving 56 animals have been made.

Collector of Record

A new Collector of Record system allows experienced marine mammal collectors to submit an expanded version of the basic information required of permit applicants on their capture operations. The Marine Mammal Commission and NMFS review the information and, if acceptable, the requestor is designated as a Collector of Record. Six collectors have been approved for this category.

MAMES

A new NMFS computer-based management information system includes Marine Mammal and Endangered Species (MAMES) permit data. The system improves access to the data in permit records and provides information for statistical and management needs, as well as immediate answers to information requests.

The following tables in Appendix I give a detailed overview of the permit program:

(1) Common and scientific names of marine mammals requested in scientific research/public display permit applications;

(2) Synopsis of permit applications;

(3) Cetacean take requested in scientific research/public display permit applications;

(4) Pinniped take requested in scientific research/public display permit applications;

(5) Cetacean take authorized by scientific research/public display permits;

(6) Pinniped take authorized by scientific research/public display permits;

(7) Authorized take for permanent removal from the wild - cetaceans;

(8) Authorized take for permanent removal from the wild - pinnipeds.

Tanners and Agents

Marine mammals can be taken by an Eskimo, Aleut, or Indian to create and sell authentic native crafts and clothing. Examples of traditional native handicrafts include weaving, carving, stitching, lacing, beading, drawing, and painting. To produce these articles, the services of a tanner to process hides is permitted. Tanners or agents, who may act on a native's behalf to obtain tanning services, must be registered. An agent and/or tanner must apply for and will receive, if qualified, a Certificate of Registration. Since 1973, 20 tanners and agents have been certified.

Beached and Stranded Marine Mammals

A system of Regional Stranding Networks has been established to handle beached and stranded marine mammals. Based on recommendations developed at the Marine Mammal Commission-sponsored Marine Mammal Stranding Workshop, these networks cover the same geographical areas as NMFS regions and are coordinated by the Regional Offices. The networks include researchers, curators of public display facilities, and State and local law enforcement agencies. All strandings are reported to the Regional Offices and, when necessary, to network members so that live beached and stranded marine mammals can receive proper attention and the cause of death and stranding can be determined.

Marking and Tagging

The Marine Mammal Tagging Office, jointly funded by NMFS and FWS, began operating in the Marine Mammal Section of the National Fish and Wildlife Laboratory in April 1978. The office is guided by the recommendations in the Report on the Marine Mammal Tagging and Marking Workshop, Laurel, Maryland 1976, and by a steering committee composed of NMFS, FWS, and MMC.

The office gathered information on marine mammal tags and marks and methods of tagging and marking. A questionnaire was sent to researchers who use tagging or marking techniques requesting information on their programs. More than 200 scientists in 20 countries were queried, and 87 replies were received. Samples and literature were requested from manufacturers and suppliers of tags, marking materials, and wildlife radio transmitters. A literature search has identified 300 scientific papers dealing with marking and tagging marine mammals.

The office contacted most active investigators in North America and participated in various tests and field studies including:

(1) Laser branding tests on captive Pacific white-sided dolphins at Sea World, San Diego, Calif.

(2) Prototype radio transmitter attachment tests on three free-ranging California gray whales in Laguna San Ignacio, Baja California, Sur, Mexico.

(3) Naphtha-based paint marking tests on a free-ranging California gray whale in Laguna San Ignacio, Baja California, Sur, Mexico.

(4) Two radio attachment tests on free-ranging West Indian manatees in Brevard and Volusia Counties, Fla.

(5) Cattle ear tag, radio transmitter attachment, and capture method evaluation on free-ranging sea otters in San Luis Obispo County, Calif.

(6) Cattle ear tag, radio transmitter attachment, and capture method tests and evaluation on free-ranging harbor seals in Netarts Bay, Oreg.

(7) Meeting to evaluate ballistic whale transmitter and recommend guidelines for its further development and testing.

(8) Evaluation of a prototype of a new cattle tag that may be applicable to marine mammals.

Satellite telemetry has been identified as one of the most important tools that can be developed for research on migratory marine mammal species. The office met with representatives of NASA, NSF, FWS, NMFS, and MMC to discuss the development of sophisticated satellite-related technology applicable to marine mammal investigations.

The Tagging Office, with partial funding from MMC and in conjunction with the American Institute and Biological Scientists (AIBS) and the National Marine Mammal Laboratory, sponsored a Pinniped and Sea Otter

Tagging Workshop in January 1979 in Seattle, Wash., to review tagging and marking programs, tag and mark types and materials, and to consider experimental design, population estimation, and veterinary aspects of tagging. A report of the workshop will be published in June 1979 and will be available from the Marine Mammal Marking and Tagging Office (FWS) in Washington, D.C.

Marine Mammal Observations

Observers from the College of the Atlantic, Bar Harbor, Maine, University of Rhode Island, Manomet Bird Observatory, Plymouth, Mass., and Woods Hole Oceanographic Institution joined NMFS scientists aboard survey cruises to record the numbers and species of whales, dolphins, and seals seen along the routes preselected in the Atlantic Ocean for fishery studies. In addition to NMFS vessels, research ships from Poland, USSR, East Germany, and West Germany were used regularly as platforms for observation. Many of the 16 regional observers in the NMFS Foreign Fishing Observer Program maintained detailed logs of sightings made while they were aboard foreign fishing trawlers to observe fishing operations.

International Programs

Marine mammals in their wide-ranging migration transcend geographical and political boundaries far beyond the U.S. 200-mile FCZ. The Act, therefore, includes strong direction on international cooperation and coordination. NMFS represents the United States in many international organizations whose goals are to protect and conserve marine mammals.

International Whaling Commission (IWC) - In 1978, the IWC agreed to prohibit commercial whaling for sperm whales in one additional area of the Southern Hemisphere, to reduce sperm whale quotas drastically in the North Pacific, and to prohibit all commercial whaling for sei whales in all of the Southern Hemisphere. The limits and prohibitions were based on recommendations made by the IWC's Scientific Committee. As a result, the IWC reduced the total allowable catch for 1979 by 3,994 whales from the 1978 limit of 23,520.

The IWC reduced the allowable catch of sperm whales in the North Pacific by more than 40 percent. A quota of 3,800 males was established; this figure includes a bycatch of females of up to 11.5 percent (437). When 3,800 animals or 437 females have been taken, whichever occurs first, all hunting for sperm whales in this area must cease. Commercial whaling for sperm whales in Division 5 of the Southern Hemisphere (western Australia) was prohibited.

The United States has encouraged whaling nations to join the IWC. At the June 1978 meeting, Chile, Peru, Republic of Korea, and Spain announced intentions to join the IWC prior to the 1979 annual meeting. The Republic of Korea became a member on December 29, 1978. Chile and Peru have taken legislative steps toward membership. Whaling by nonmembers would be reduced from about 13 to 3 percent if the four countries become members. The IWC passed resolutions to encourage nonmember whaling nations to become members, to encourage IWC member nations to prevent transfer of vessels or gear to nonmember nations, to discourage dissemination by their citizens of expertise and assistance necessary to conduct whaling to nonmember nations, and to prevent import of whale products from nonmember whaling nations. The United States participated in the IWC observer program from land stations in Australia and took part in a minke whale assessment program aboard Japanese ships.

Antarctic Living Marine Resources

NMFS took part in negotiations to establish a conservation convention for Living Marine Resources of the Antarctic, a region with abundant marine mammal populations. The convention will be designed to protect the Antarctic ecosystem and all marine living resources, except whales and seals that are already protected under separate conventions. A diplomatic conference to conclude the convention will be held in the summer of 1979 in Canberra, Australia.

The Convention for the Conservation of Antarctic Seals became effective March 11, 1978. The Convention calls for the coordinated management of Antarctic seals and the exchange of scientific information. The United States, Belgium, France, Norway, South Africa, U.S.S.R., and United Kingdom are parties to the Convention. Argentina, Australia, Chile, Japan and New Zealand have signed, but not ratified the Convention.

North Pacific Fur Seal Commission (NPFSC)

At the 21st annual meeting of the North Pacific Fur Seal Commission in Ottawa, Ontario, Canada, April 1978, the standing Scientific Committee reported that data were insufficient to judge whether pelagic (taking at sea) sealing combined with land sealing could be permitted without harming the seal populations. The United States requested information from the U.S.S.R. on their experiments with humane methods of harvesting. The United States will continue the moratorium on harvesting on St. George Island, with the exception of 350 seals taken by native residents for subsistence. The United States presented a 5-year progress report on research made during the moratorium on the Island.

The commercial harvest of fur seals in 1978 was 7,400 by the Soviet Union and 24,829 by the United States.

Inter-American Tropical Tuna Commission (IATTC)

The international tuna/porpoise program approved by the Commission in 1977 was reviewed at the annual meeting in October in Tokyo, Japan. The IATTC initiated a Sea-going Technician Program in 1979 and placed observers onboard vessels belonging to Canada, Costa Rica, Mexico, Nicaragua, Panama, and the United States.

The United States again requested from the Commission a 1,000-ton allocation of the IATTC quota of tuna for porpoise behavior and gear research during 1979.

The United States requested countries leaving the Commission (Costa Rica and Mexico) to clarify their intentions regarding continued participation in the Commission's porpoise program. Both countries indicated continued support for the program. The two countries withdrew from the Commission,because they would like to see the IATTC renegotiated to reflect the global trend of coastal countries controlling fishery resources within their 200-mile zones. Observers from Canada and Panama participated in the training program offered by NMFS in San Diego in 1978,and each made two successful voyages.

United States - Mexico Discussions

Two meetings were held in 1978 between United States and Mexico to discuss research plans and problems of mutual concern. Mexican scientists were interested in studies of (1) gray whales in calving areas, (2) interactions between marine mammals and fisheries, and (3) tropical dolphin biology.

At the second meeting, plans for research on gray whales in the lagoons of Baja California were discussed. Both sides agreed to a joint 5-year program to investigate the habitat needs of the gray whale and to monitor changes in the size of its population.

International North Pacific Fisheries Commission (INPFC)

During the negotiations of the International North Pacific Fisheries Commission in 1978, the United States and Japan agreed to a Memorandum of Understanding (MOU) concerning marine mammal research. The MOU provided for cooperative research to study the impact upon marine mammals of the incidental take by the Japanese high-seas salmon gillnet fishery. (See Dall porpoise research).

At its 25th annual meeting in October 1978, the Commission established an ad hoc committee to deal with this marine mammal problem and a scientific subcommittee to advise the ad hoc committee. The first subcommittee meeting was held in March 1979 in Tokyo to review 1978 research results and plan the 1979 field program.

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

The Second Meeting of the Conference of the Parties to CITES made decisions on two issues relating to whales, other cetaceans, and the International Whaling Commission. The meeting adopted a U.S.-proposed resolution calling on Parties of CITES to prohibit issuance of import or export permits or certificates of introduction from the sea for products from stocks of whales totally protected from commercial whaling by the IWC. The meeting agreed to a proposal by the United Kingdom that all species of cetaceans not listed on Appendix I should be listed on Appendix II.

Conference To Negotiate a New Convention on Cetacean Conservation

The first preparatory meeting to negotiate a new convention on the conservation of cetaceans was held in Copenhagen, Denmark, in July 1978. The meeting, attended by member nations of the IWC and interested non-members, developed a new version of a draft convention. The new convention would replace the IWC and would include more cetaceans than the current one. The nations set up a group to work on the draft and agreed to a second preparatory meeting in 1979.

U.S.-U.S.S.R. Marine Mammal Project, Environmental Protection Agreement

The Marine Mammal Project was formed in 1973 to implement the Environmental Protection Agreement signed by the United States and the U.S.S.R. in 1972. The two nations cooperate on marine mammal research studies of mutual concern. NOAA has the leadership authority for the Project in the United States.

In 1978, members of the Project made combined cruises, field studies, workshops, and laboratory studies. In May, the Soviet Project Leader took part in an aerial survey of bowhead whales in the Chukchi Sea area around Barrow, Alaska. Two Soviet scientists participated in a marine mammal sighting survey cruise aboard a United States research vessel in the eastern Bering Sea. A Soviet scientist joined a land-based survey of ringed seals along the coast of northern Alaska. Two Soviets attended the odontoceti ageing workshop in La Jolla, Calif., and reviewed husbandry, care, and maintenance procedures at an oceanarium in San Diego.

At the Project's fifth meeting held in the U.S.S.R., data collected from joint studies of ice seals and walrus were exchanged as well as literature and marine mammal harvest statistics. A resolution noted the lack of progress on negotiating a walrus-ice seal agreement or convention since the last meeting and called for the Joint Committee of the Environmental Agreement to stimulate both governments to consider

such an agreement. Reciprocal access to areas of marine mammal concentration in the Bering and Chukchi Seas was discussed. Proposals for future projects include joint studies on the Baikal seal, joint studies on northern sea lions and harbor seals, and continuing studies on cetacean color patterns, cetacean morphology and physiology, and on ice seals and walruses.

Legal Actions

Globe Fur Dyeing Corporation v. The United States of America, Juanita Kreps, Richard Frank and Robert W. Schoning, Civil No. 78- 0693 (D.D.C. 1978)

The Globe Fur Dyeing Corporation sought to have Section 102(b)(2) of the Marine Mammal Protection Act declared unconstitutional. This provision prohibits the importation of marine mammals including raw, dressed, or dyed fur or skin, if the mammal was nursing at the time of taking or less than 8 months old, whichever occurs later. The plaintiff imported animal skins before passage of the Act.

On November 16, 1978, a Federal judge held that the challenged provision was not unconstitutional and granted the Defendant's (the U.S.) Motion for Summary Judgment. The Judge found this provision rationally related to the goals of the Act, such as conservation and preservation of aesthetic and ethical values. The Plaintiff has appealed the decision.

LeVasseur, Sipman and White v. Atkinson, Schoning, the University of Hawaii, Marine Animal Productions, Inc., and John Does 1-30, Civil No. 78-0195 (D.C. Ha., 1978)

The Plaintiffs, LeVasseur, Sipman, and White, sued to prohibit the capture and transport of four dolphins to a scientific research facility at the University of Hawaii. NMFS had issued a scientific research permit to allow these activities. Plaintiffs alleged that the dolphins would suffer injury at this facility, that the facility failed to meet the standards required by the Act, and that NMFS has violated the requirements of the National Environmental Policy Act (NEPA) in issuing this and other scientific research permits.

On June 2, 1978, the date the Complaint was filed, a Federal judge issued a Temporary Restraining Order to stop NMFS and its agents and representatives from capturing the dolphins. On June 7, the judge rejected Plaintiffs' second Motion for a Temporary Restraining Order to expand or extend the first Order because the period for judicial review of permits provided for by the Act had expired before the Plaintiffs filed suit.

On November 29, 1978, Plaintiffs filed an amended Complaint.

Hopson v. Kreps, No. A78-184 Civil, U.S. District Court for the District of Alaska.

The Plaintiffs are Alaska natives seeking to invalidate regulations that restrict their taking of bowhead whales. In 1977, the IWC determined that the bowhead whale should be protected and placed quotas on subsistence bowhead takings. The United States is a party to the IWC and has implemented these quotas under the authority of the Whaling Convention Act of 1949. Plaintiffs argued that the IWC and the Whaling Convention Act do not authorize any regulation of native subsistence whaling and that the United States cannot impose any restrictions on the native take of bowheads.

On January 11, 1979, a Federal judge dismissed plaintiffs' action by determining that the U.S. regulations enforcing the IWC quotas are so directly linked to the conduct of U.S. foreign relations that the court lacked subject matter jurisdiction to review the validity of the regulations. Thus, the dismissal preserves the Whaling Convention Act as authority for the U.S. to impose IWC quotas. The judge has refused to reconsider his decision, and the plaintiffs have filed a notice of appeal with the U.S. Court of Appeals for the Ninth Circuit.

Law Enforcement

The Act makes it illegal to take or import marine mammals or their parts or products, unless an exception has been made. The moratorium is enforced by agents of NMFS or State agents under contract to NMFS. Contracts were renegotiated with the States of Alaska, California, Florida, Oregon, and Washington. Most violations involve illegal imports of marine mammal parts or products.

During the past year, a company in Seattle was discovered as a major importer of sealskin sporrans (a large purse worn as part of a Scottish Highland costume). NMFS Special Agents seized 143 of the sealskin sporrans imported from Scotland. The case was settled by payment of a civil penalty and a loss of the seized sporrans.

In the Southwest Region, most law enforcement activities concern the incidental take of porpoise by tuna fishermen. In 1978, observers were onboard 113 tuna cruises. Porpoise sets not in compliance with the regulations were detected on 73 of these cruises. About 80 percent of the infractions observed involved failures to provide two manned speedboats, to launch a rubber raft, and to use a facemask and snorkel.

Two persons were arrested on a charge of harassing, hunting, killing, and attempting to harass, hunt and kill, a bottlenosed dolphin in waters

under U.S. jurisdiction. The two pleaded guilty and were placed on 1-year's supervised probation by the U.S. District Court for the middle district of Florida. The owner of the vessel used in committing the unlawful acts was fined $10,000 in a separate civil action.

In December 1978, the Mexican fishing vessel *Prope Mex* (A-39G) was seized off Port Isabel, Tex., after persons aboard the vessel were observed harpooning bottlenosed dolphins. The master of the *Prope Mex* was arrested and later pleaded guilty to a charge of unlawfully taking marine mammals. He was fined $5,600 and forfeited all equipment aboard his vessel that could be used for taking and rending marine mammals. Five dead dolphins seized as evidence were forfeited and given to Pan American University and Texas A & M University for scientific study.

In December, NMFS Special Agents seized four Commerson's dolphins unlawfully imported in the United States at John F. Kennedy Airport, NY. The dolphins were being shipped from Argentina to an aquarium in Japan with an intermediate stop in New York. One of the dolphins died in shipment, and the other three were in poor condition. Following the seizure, the surviving dolphins were taken to Mystic Marinelife Aquarium, Mystic, Conn., where later, two of the dolphins died. The Japanese firm responsible for shipping the dolphins has been charged in a civil notice of violation with unlawfully importing marine mammals into the United States. The U.S. Government is seeking a monetary penalty in addition to forfeiture of the animals.

Law Enforcement Actions

Investigations	480
Documented Violations	410
Cases closed by civil penalties assessed and/or forfeiture of seized contraband	111
Cases closed as unfounded or for lack of evidence	50
Cases closed when seized items were abandoned, or for other reasons	50
Cases pending	197
Cases closed through successful criminal prosecution	2
Investigations resulting in seizures	269
Illegal items seized from investigations	671
Investigations involving illegal takings. 1/	164

1/ The Act defines taking as harassing, hunting, capturing, or killing, or attempting any of these actions.

Funding

The fiscal year 1979 budget (Oct.1, 1978,to Sept. 30, 1979) for marine mammals is $7,337,000 and includes 104 positions. Funds are authorized under the Marine Mammal Protection Act, the Endangered Species Act, the Fur Seal Act, and other sources. The budget for fiscal year 1978 was $5,761,000 and 98 positions.

Funding covers administration of the Washington, D.C., office, law enforcement, research at the Northwest and Alaska Fisheries Center and the Southwest Fisheries Center, and the tuna-porpoise observer program.

PART II - CURRENT STATUS OF THE STOCKS OF MARINE MAMMALS

Introduction

Beginning with this report, only species which have new significant information will be discussed. The complete status of stocks will be published every third year (e.g., 1977-78 and, again, in 1980-81). The status of nine marine mammals appears in the 1978-79 report. Copies of the 1977-78 annual report, which contain the complete listing, are available from the NMFS Washington, D.C., office.

Of the approximately 108 species of pinnipeds and cetaceans throughout the world, status reports are available for 69 species that are the responsibility of the Secretary of Commerce. The population stocks of only a few marine mammals have been delineated, and the effort needed to obtain information on most population stocks is beyond the scope of current research programs.

Information about each species is summarized under six major headings. They are distribution and migration, abundance and trends, general biology, ecological problems, allocation problems, and current research. Selected references are listed at the end of each species discussion.

References are not cited in the report except for the paragraph on abundance and trends. Because of the importance of data on abundance and trends, information in this section is cited and citations are given in the list of references. Data on the abundance of marine mammals are difficult and costly to obtain. Except for a few species that have been harvested commercially, such as large whales and fur seals in the North Pacific Ocean, abundance data are usually inadequate for management purposes.

CALIFORNIA SEA LION
(Zalophus californianus californianus)

Distribution and Migration. This subspecies of the California sea lion ranges along the west coast of Mexico from about lat. 19°N to southern British Columbia, Canada. The California sea lion breeds on some Gulf of California islands northward to San Miguel Island, Calif., at 34°N. Many adult and subadult males move northward along the California, Oregon, Washington,and British Columbia coasts after the breeding season. Feral animals which have escaped from captivity are being reported in the southeastern United States (including the Gulf of Mexico), but there is yet no evidence of breeding (D.K. Caldwell, pers. comm., 1974).

Another subspecies occurs on the Galapagos Islands, and still another, formerly found in Japanese waters, from 34° to 37°N, is now extinct.

Abundance and Trends. The California Department of Fish and Game censuses indicate that the California sea lion population reached a low level in the early 1930's in California waters, then made a steady recovery and apparently leveled off about 1961 with little variation in the counts since then (Ripley, Cox, and Baxter, 1962; Carlisle and Aplin, 1971). During the breeding season (May-July) almost the entire population is found south of lat. 34°N. Odell (1971) obtained minimum counts of 34,328 California sea lions on all Channel Islands in June 1964. Peterson and LeBoeuf (1969) estimated that 40,000 animals were ashore on San Nicolas and San Miguel Islands during the 1967 and 1968 breeding seasons. LeBoeuf et al. (1976) completed a photographic count of the Channel Islands area 27-30 June 1975 and found 35,668 animals. Rice, Kenyon, and Lluch (1965) counted 16,150 California sea lions on Guadalupe, San Benito, and Cedros Islands, Mexico, in January and February 1965. Brownell, et al. (1974) made counts in June 1968 of 15,467 on Guadalupe, San Benito, Cedros, and Natividad Islands, Mexico. Orr, Schoenwals, and Kenyon (1970) counted this species in the Gulf of California between 1960 and 1968 and made counts on six islands of about 5,400 animals in April 1966. Mate (1977) in July 1975 counted 9,332 animals on islands in the Gulf of California. During an aerial survey of the entire range (except Guadalupe Island) in June 1976, Mate (1976) obtained a count of 87,727 animals. The proceeding figures indicate that the present population may approach 90,000 animals about equally divided between the United States and Mexico.

During the nonbreeding season, 2,500 Z. californianus may be found in Oregon, 500 in Washington and 1,000 in British Columbia (Mate, 1975).

On February 25, 1972, 430 California sea lions were counted in Barkley Sound off Vancouver Island, 35 on Race Rocks off Victoria, B.C., and 10 in Dodds Narrows (lat. 49°N) near Nanaimo, B.C. (Bigg, 1973).

General Biology

Species Statistics. The adult male grows to 2.2 m and 275 kg; the adult female to 1.8 m and 91 kg. Newborn pups are about 0.8 m long and weigh 5 to 6 kg.

Reproductive Data. On San Nicolas Islands, the pupping season begins about 15 May and lasts about 5 weeks, with the peak during the first week in June. The females usually breed 15 to 30 days after parturition, and the mother and pup remain together the first year. The males establish and defend breeding territories on land, the females move about freely.

Age-Growth Data. California sea lions have lived 18 to 20 years in captivity.

Feeding Habits. The California sea lion's food is squid, octopus, and a variety of fish such as herring, sardines, rockfish, hake, and ratfish.

Parasites and Diseases. During the past 2 or 3 years, an apparent increase in premature births and in the mortality rate of subadults and young adults has occurred. Three potential causes have been isolated: (1) chemical residues (polychlorinated biphenyls, DDT, and metabolites), (2) a bacterium (Leptospira), and (3) a virus. The greatest single cause of death in wild and captive animals is lungworm. Animals in captivity have also died from pleuropneumonia, pneumonia, and enteric infections, diseases which may also occur in wild populations.

Ecological Problems. Killer whales and large sharks are known to prey upon sea lions. Possibly there is some competition with other otariids for food and hauling grounds. California sea lions associated with certain hauling grounds and rookeries have practically abandoned these areas, because of harassment by man. Although most major populations of sea lions are now on sites not easily reached by the public, a few areas, such as the Monterey Bay breakwater in Monterey, Calif., are used extensively as hauling grounds by California sea lions and are visited frequently by tour boats. The latter sometimes pass within 10 m of the hauling grounds.

Allocation Problems. A history of conflict exists between people for and against complete protection of this species. Some conservation

groups would like complete protection for the California sea lion while some fishermen want the number of California sea lions to be controlled. California sea lions are probably the most widely sought-after species of eared seals in the world for public display. In August 1976, North American zoos or oceanaria had 423 Califonia sea lions on public display (Cornell and Asper, 1976).

Current Research. The NMFS conducts research on this species on San Miguel Island off California. The following organizations in California are carrying out research on the California sea lion: University of California, Santa Cruz; University of California, Berkeley; California Academy of Science, San Francisco; Humboldt State University, Arcata; Fisheries Research Board of Canada, Nanaimo; Naval Oceans Systems Center, San Diego; and Navy Bioscience Laboratory, Oakland.

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HAWAIIAN MONK SEAL
(Monachus schauinslandi)

Distribution and Migration. The Hawaiian monk seal breeds only on Necker Island, French Frigate Shoals, Laysan Island, Lisianski Island, Pearl and Hermes reef, and Midway and Kure Atolls of the Northwestern (Leeward) Hawaiian Islands. The first five of these islands are within the Hawaiian Islands National Wildlife Refuge (HINWR). Rarely do individuals wander southeastward to the main Hawaiian Islands. The species is not known to have a migratory pattern.

Abundance and Trends. The total population was estimated at 1,350 in 1958 (Rice, 1960). It was classified as endangered under the Endangered Species Act of 1973, on November 13, 1976. All monk seals are considered endangered by the Convention on International Trade in Endangered Species of Wild Fauna and Flora, signed March 3, 1973. Counts in the 1970's suggest the population has declined to about 50 percent since the late 1950's. Kenyon (1973) described population declines on inhabited islands where he attributed the decline to human disturbance of animals on pupping and nursing areas. Monk seal populations on uninhabited islands have also declined since the early 1960's, and,during 1978, higher than normal mortality among monk seals was recorded on Laysan Island (R.L. DeLong, pers. comm.).

General Biology

Species Statistics. An adult female measures 2.3 m, and her estimated weight is 273 kg. On the average, females outweigh adult males. A typical male is about 2.1 m long and weighs about 173 kg. The newborn pups weigh 16 to 17 kg and are about 100 cm long.

Reproductive Data. Observations of 47 tagged individuals on Kure Atoll indicate an annual reproductive rate of 15 living pups per 100 adults. About 19 percent of the adult females breed in successive years, and only 56 percent of the adult females had pups in either of two seasons.

The age at which Hawaiian monk seals of either sex first breed is not known, but they may do so at age 3 years. Pups are born from late December to July, with the peak in April and May. They nurse about 6 weeks.

Age-Growth Data. The pup grows from 100 to about 130 cm during its first year. The weights of 6 yearlings averaged 45 kg. Two seals tagged as yearlings doubled their weight in their second year; one increased in length by 36 percent and the other by 15 percent. They probably do not attain full growth until at least 4 years of age. A technique developed for determining the ages of these seals by

examination of the upper canine teeth indicated an age for one female of about 11 years and about 20 years for a male.

Sharks are serious predators.

Feeding Habits. Spewings found on haulout areas included the remains of reef and bottom fishes, eels, lobster, and cephalopods.

Ecological Problems. Harassment of the monk seal by humans and dogs on Midway and Kure Atolls may be causing a problem by preventing these animals from using sheltered dry pupping areas.

Allocation Problems. None known.

Current Research. A joint study was begun in 1976 by NMFS and U.S. Fish and Wildlife Service scientists. All breeding islands were surveyed in 1976, 1977, and 1978, and Kure and French Frigate Shoals Island populations have been studied. Marine Mammal Commission contract scientists have made a population biology study of the Laysan Island monk seal population in 1977 and 1978. Investigation of mortality in monk seals was begun in 1978.

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Adult female Hawaiian monk seal with a newborn pup at French Frigate Shoals, Hawaii. Photo by Robert DeLong, National Marine Mammal Laboratory (NMFS), Seattle, Wash.

NORTHERN ELEPHANT SEAL
(Mirounga angustirostris)

Distribution and Migration. This species originally occupied rookeries and hauling grounds on the mainland and islands from Cabo San Lazaro, Baja California, northward to Pt. Reyes, just north of San Francisco. Nonbreeding animals range at least as far north as southeastern Alaska.

This species now breeds on Isla San Benito, Islas Los Coronados, Isla Natividad, Isla Guadalupe, Isla Cedros, San Miguel Island, Santa Barbara Island, San Nicolas Island, Ano Nuevo Island, and Southeast Farallon Island.

Abundance and Trends. By 1890 the population had been reduced to 100 or fewer animals found only on Guadalupe Island, but this number increased to an estimated 15,000 animals by 1960 (Bartholomew and Hubbs, 1960). A total of 10,581 were counted in April 1968 on the six Mexican islands off Baja California (Brownell, et al., 1974). LeBoeuf and Bonnell (1978) estimated a population of about 60,000 in 1977. This species has reoccupied most or all of its historic rookeries and hauling grounds.

By 1977, Guadalupe and San Benitos Islands had the only stabilized populations and all the other colonies were apparently continuing to increase in size (LeBoeuf, 1977).

General Biology

Species Statistics. Maximum body lengths are about 5 m for adult males and 3.3 m for adult females. Newborn pups are about 1.2 m long and have black natal pelage.

Reproductive Data. The adult males usually arrive first on the rookeries in November, followed by the pregnant females in December. Dominant adult males occupy choice locations within the breeding colonies and do most of the mating. The female usually bears a single pup about 7 days after her arrival and weans it about a month later. The female is bred during her last few days ashore. Most pups are born January 1 to February 10.

Age-Growth Data. On San Nicolas Island most pups have molted their black natal pelage for the gray pelage of older animals by March 1. The age at which the pups go to sea is not firmly established, but they spend at least 2 to 3 months ashore. Older animals return to shore to molt beginning with the females about April 1, followed by immatures of both sexes; the males are the last to return.

Feeding Habits. Little information on the feeding habits of Mirounga is available. The stomach of one elephant seal contained seven ratfish, one 66.0 cm California dogfish shark, one swell or puffer shark, three skates, and four squids. The species apparently can feed at considerable depths, as indicated by prey species and the fact that three young Mirounga were taken on hooks set at about 100 fathoms. Other known prey are: cusk eels, toadfishes, scorpionfishes, flounder, cat sharks, sardines, anchovies, plainfin midshipmen, lampreys, rockfish, flatfish, and octopus.

Ecological Problems. Oil from the Santa Barbara spill of January 28, 1969, coated about 100 elephant seal pups ashore on one area of San Miguel Island. The pups had been weaned and apparently suffered no ill effects.

Allocation Problems. None known.

Current Research. Scientists from the University of California at Santa Cruz, and from the Point Reyes Bird Observatory, Stinson Beach, Calif., are studying this species.

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MINKE WHALE
(Balaenoptera acutorostrata)

Distribution and Migration. The minke whale inhabits all oceans of the world, except equatorial regions, and ranges into the polar pack ice zones in the Northern and Southern Hemispheres. It makes extensive seasonal migrations between high-latitude summering grounds and low-latitude wintering grounds.

At least three geographically isolated populations are recognized, one in the North Pacific Ocean, another in the North Atlantic Ocean, and a third in the Southern Hemisphere. The affinities of the minke whale stocks in the northern Indian Ocean are unknown.

In the eastern North Pacific Ocean, the minke whale ranges from the Chukchi Sea south to northern Baja California during the summer, and from central California south to within 2 degrees of the Equator during the winter.

In the western North Atlantic Ocean, it ranges from Baffin Bay south to Chesapeake Bay during the summer, and from the eastern Gulf of Mexico and northeastern Florida south to Puerto Rico and the Virgin Islands during the winter.

Abundance and Trends. The pre-exploitable population in the Southern Hemisphere numbered about 183,000[1/] and currently numbers about 157,000. For the North Atlantic, there is no estimate of the original population, but the present population is about 80,000. No estimates are available for the North Pacific.

The minke whale has long been an important species in the "small whale" fisheries of the world. In 1977 (including the 1977/78 Antarctic season), catches were over 8,214, distributed as follows:

North Atlantic	1,966
Japan	248
Korea	no data (561 in 1975)
Brazil	1,000
Antarctic	5,000

General Biology

Species Statistics. The minke whale is the smallest member of the genus Balaenoptera, not exceeding 10 m in length in the Northern Hemisphere.

1/ From back calculation estimates using current data.

The northern animals are distinguished by a white band on the flipper; individuals from the Southern Hemisphere average about a meter longer and usually lack the white flipper band. The minke whale feeds mainly on euphausiids, but also takes some small fishes. In the Northern Hemisphere it attains sexual maturity at an age of 7 to 8 years and an average body length of 7.0 m in males and 7.9 m in females. The female bears a calf only once every 2 years (rather than annually, as once believed). During the summer, pregnant females migrate to much higher latitudes than do the lactating and immature females.

Ecological Problems. None known.

Allocation Problems. None known.

Current Research. Research on minke whales is being conducted by the Japanese Far Seas Fisheries Research Laboratory, the South African Division of Sea Fisheries, and the Norwegian State Institute for Whale Research.

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BRYDE'S WHALE
(Balaenoptera edini)

Distribution and Migration. Bryde's whale is found in tropical and warm temperate waters around the world. In the western Atlantic Ocean, it ranges from Maryland south to Cabo Frio, Brazil, and in the eastern Atlantic Ocean from Morocco south to the Cape of Good Hope. In the Indian Ocean, it ranges from the Cape of Good Hope north to the Persian Gulf, east to the Gulf of Martaban, Burma, and south to Shark Bay, Western Australia. In the western Pacific Ocean, it is distributed from northern Hokkaido, Japan, south to Victoria, Australia, and North Island, New Zealand; in the eastern Pacific Ocean, it ranges from central Baja California, Mexico, south to Iquique, Chile.

At least some of the temperate zone populations (Japan, South Africa) make limited seasonal migrations. The tropical populations may be sedentary.

Abundance and Trends. The pre-exploitable population in the western North Pacific, north of lat. 20°, originally numbered about 20,000,[1/] and has now been reduced to about 16,000. No estimates are available of population sizes elsewhere in the world.

Until recently, Bryde's whales have been of minor importance in the modern whaling industry, and only a few were taken by shore stations in Japan, South Africa, and rarely elsewhere. Since 1970, however, increasing numbers have been harvested by pelagic expeditions in the western North Pacific Ocean, as these expeditions have shifted operations more to the south. In 1977, 775 were killed there--699 by Japanese and Soviet pelagic expeditions, and 76 by Japanese shore stations. None were reported taken in the Southern Hemisphere. However, some may have been taken by the combination catcher-boat/factory-ship *Sierra* (registered in Somalia) off Angola.

General Biology. Bryde's whale is similar in appearance to the sei whale, and the two species were formerly confused. The Bryde's whale is slightly smaller-usually less than 13.5 m long; its throat grooves extend posteriorly beyond the umbilicus, and it has a pair of lateral ridges on top of its snout, one on each side of the median ridge. The fringe on its baleen plates is much coarser than that of the sei whale. It feeds mainly on small schooling fishes and also takes some euphausiids and other crustaceans. Males attain sexual maturity at an average length of 12.2 m and females at 12.5 m. The mating and calving season is usually during the winter, but in some areas--South Africa,

1/ From back calculation estimates using current data.

for example, they breed year-round. The gestation period is about 1 year. The female does not bear a calf 2 years in succession.

Ecological Problems. None known.

Allocation Problems. None Known.

Current Research. Research on Bryde's whale is being conducted by the South African Division of Sea Fisheries and the Japanese Far Seas Fisheries Research Laboratory.

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SEI WHALE
(Balaenoptera borealis)

Distribution and Migration. The sei whale is nearly worldwide in distribution. In the eastern North Pacific, it summers from California to the Gulf of Alaska and Aleutian Islands; in the North Atlantic, from New England and the British Isles to the Arctic Ocean. It winters at low latitudes. In the Southern Hemisphere, this species summers in all oceans from lat. 30°S southward, and in winter, it is generally found north of lat. 40°S.

Abundance and Trends. Information in this section is from the annual reports of the International Whaling Commission and from recent reports of the Bureau of International Whaling Statistics. The number of sexually mature animals originally numbered about 200,000 (excluding the North Atlantic, for which no estimates are available), and has now been reduced to about 57,000, distributed by major ocean areas as follows:

Ocean	Original 6/ population	Current population
North Atlantic	no data	no data
North Pacific	42,000	9,000
Southern Ocean	160,000	48,000

Inclusion of sexually immature whales would increase these estimates by roughly 50 percent.

Catches of sei whales in recent seasons have been:

Season	North Pacific	North Atlantic	Southern oceans (south of 40°S) 1/ 2/	Southern land stations
1969	5,158	222	5,857	917
1970	4,504	139	6,153	465
1971	2,993	476	5,452	446
1972	2,327	315	3,864	346 2/
1973	1,856	139	4,392	30 2/
1974	1,280	9	3,859	354 2/
1975	504	138	1,820	549 2/
1976	0 3/	5	1,858	4 5/
1977	0 3/	132 4/	565	5 5/

1/ Southern ocean catches are for the season 1969-70 through 1977-78.
2/ No data from Chile.
3/ Protected.
4/ No data from Greenland.
5/ No data from Peru or Chile.
6/ From back calculation estimates using current data.

General Biology. The species resembles the fin whale, but is slightly smaller, with less white underneath, and a large dorsal fin. In the far north of the Northern Hemisphere it feeds mostly on copepods. The diet is much more varied in lower latitudes--including euphausiids, copepods, sauries, anchovies, herring, sardines, and jack mackerel. Sei whales usually travel in small pods of 2 to 5. They attain sexual maturity at 6 to 12 years of age, at a body length of about 13.1 m (males) and 13.7 m (females). Females bear calves every 2 or 3 years. The mating and calving season occurs in winter in the respective hemispheres. Gestation lasts 1 year, and the calf is weaned when about 7 months old.

Seven percent of the sei whales taken off California have been infected with a unique disease that causes progressive shedding of the baleen plates and their replacement by an abnormal papillomalike growth.

Ecological Problems. None known.

Allocation Problems. None known.

Current Research. The NMFS is carrying out population and biological studies of this species. Other organizations carrying out research on this species are the Japanese Whale Research Institute and Japanese Far Seas Fisheries Research Laboratory (North Pacific and Antarctic), Fisheries Research Board of Canada (North Atlantic), Norwegian State Institute for Whale Research (Antarctic), South African Division of Sea Fisheries (South Africa), and Soviet All-Union Research Institute of Marine Fisheries and Oceanography.

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FIN WHALE
(Balaenoptera physalus)

Distribution and Migration. The fin whale is worldwide in distribution. In the eastern North Pacific, it summers from California into the Chukchi Sea, and in the North Atlantic from Cape Cod and Spain into the Arctic Ocean. The fin whale migrates to more southern latitudes in winter. In the Southern Hemisphere, it is generally found at lat. 47° to 60° S. in summer and from 20° to 40° S. in winter.

Abundance and Trends. Information in this section is from the annual reports of the International Whaling Commission and from the report of the Bureau of International Whaling Statistics, Sandefjord. The stocks available for commercial harvest originally numbered about 470,000, but have been reduced to about 107,000. These are distributed by major ocean areas as follows:

Ocean	Original 5/ population	Current population
North Atlantic	25,000	10,000
North Pacific	44,000	17,000
Southern Ocean	400,000	80,000

Inclusion of immature whales shorter than the legal length limit would increase these estimates by roughly 50 percent. Recent catches from the stocks have been:

Season	North Pacific	North Atlantic	Southern Ocean 1/	Southern land stations
1969	1,276	2/ 800	3,002	224
1970	1,012	1,063	2,890	135
1971	802	751	2,683	104
1972	758	689	1,761	76
1973	460	342	1,288	66
1974	413	346	979	58
1975	508	3/ 245	206	84
1976	4/ 0	3/ 275	4/ 0	4/ 0
1977	4/ 0	3/ 144	4/ 0	4/ 0

1/ Southern ocean catches are for the seasons 1969-70 through 1977-78.
2/ An additional 122 "baleen whales" taken off Spain were probably fin whales.
3/ No data from Spain.
4/ Protected.
5/ From back calculation estimates using current data.

The fin whale is commercially the most valuable baleen whale. Stocks in the North Pacific and southern oceans are below maximum sustainable yield levels.

General Biology. This species is second in size only to the blue whale; in the Northern Hemisphere it grows to at least 23.2 m and is distinguished by a gray back, white belly, and well-developed dorsal fin. Fin whales feed mostly on euphausiids, but often eat fish--especially anchovies in the North Pacific and capelin in the North Atlantic.

They usually travel in small pods of 2 to 5 animals. Fin whales are sexually mature at 6 to 12 years, with a body length of about 17.7 m (males) and 18.3 m (females). Females bear calves every 2 to 3 years. The mating and calving season occurs in winter in respective hemispheres. Gestation lasts 1 year, and the calf is weaned at about age 7 months.

Ecological Problems. None known.

Allocation Problems. None known.

Current Research. The NMFS is making population and biological studies of this species. Other organizations carrying out research on this species are the Japanese Whales Research Institute and Japanese Far Seas Fisheries Research Laboratory (North Pacific and Antarctic), Fisheries Research Board of Canada (North Atlantic), British National Institute of Oceanography (South Africa), and Soviet All-Union Research Institute of Marine Fisheries and Oceanography (North Pacific and Antarctic).

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BOWHEAD WHALE
(Balaena mysticetus)

Distribution and Migration. The bowhead whale inhabits arctic and subarctic waters in four principal areas: (1) from Spitzbergen west to east Greenland; (2) in Davis Strait, Baffin Bay, Hudson Bay, and adjacent waters; (3) in the Bering, Chukchi, Beaufort, and East Siberian Seas; and (4) in the Okhotsk Sea. These whales travel singly, in pairs or threes during the spring. In autumn they are generally scattered, but may occur in groups of up to 50. Bowheads migrate in association with the seasonal movement of arctic pack ice.

Abundance and Trends. All bowhead whale populations were decimated by the end of the 19th century because of the great value of this species for oil and baleen (Tomilin, 1957). No commercial whaling for bowheads has taken place since about 1915. Bowhead whales have been completely protected from commercial whaling by the Convention for the Regulation of Whaling since 1947, and, subsequently, by the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973. These acts allow for a subsistence harvest of these whales by the Indians, Aleuts, and Eskimos. In the last two decades, the take of bowhead whales by Eskimos in Alaska has been (Maher and Wilimovsky, 1963; Marquett, unpublished data):

Year	Whales taken	Year	Whales taken	Year	Whales taken
1952	2	1965	6	1972	38
1959	1	1966	13	1973	37
1960	19	1967	4	1974	20
1961	10	1968	16	1975	15
1962	12	1969	18	1976	48
1963	10	1970	24	1977	29
1964	16	1971	24	1978	12

The differences in take between years is primarily because of variation in hunting conditions, although in recent years an increase in hunting intensity has taken place. Bowhead whales are taken only occasionally by the USSR for their natives.

Based upon direct counts of whales migrating past ice camps on the nearshore icelead at Barrow, Alaska, the best estimate of abundance for the Bering, Chukchi, and Beaufort Seas stock is 2,264 with a range of 1,700 to 2,800 bowhead whales. Aerial and vessel surveys have verified that this estimate encompasses the total migration past Barrow, that

bowhead whales do not occur in iceleads offshore of Barrow, and that none of the population remains in the northern Bering or Chukchi Seas after the spring migration into the Beaufort Sea.

In the Spitzbergen area and the Okhotsk Sea, only a few sightings have been made in recent years.

General Biology.

Species Statistics.-- The bowhead whale grows to 18 m in length. The color is generally black or dark gray, marked by some white, generally on the chin but sometimes also on the belly.

Reproductive Data.-- Sexual maturity is reached at 11.6 m and 12.2 m in males and females, respectively. Mating probably occurs in early April or earlier. Gestation lasts 12 to 13 months, with a single calf (3 - 4.5 m long) born in April-May. The reproductive cycle is apparently 2 years long.

Age-Growth Data.-- The calf is weaned at 6 months. Yearlings are from 6.7 to 7.9 m long. These whales travel singly, in pairs or threes during the spring. In autumn they are generally scattered, but may occur in groups of up to 50.

Feeding Habits.-- The species feeds mainly on euphausiids and other krill, but occasionally on bottom-dwelling invertebrates.

Parasites and Diseases.-- Bowhead whales appear to be remarkably free of external and internal parasites.

Ecological Problems. The north-slope oil project might alter the inshore southward migration should fall steamer and barge traffic increase and force the whales farther offshore.

Allocation Problems. Some conflict of interest may exist between people who would like complete protection for bowhead whales and Eskimos who hunt these whales.

Current Research. The NMFS contracted with the University of Southern California to gather biological data on bowhead whales in 1973. In the spring of 1974, NMFS re-instituted a research program on bowhead whales, focusing primarily on monitoring the Eskimo hunt. Utilizing funds from the Bureau of Land Management's Outer Continental Environmental Assessment Program, this research effort was expanded in 1976 to include censusing efforts. In 1978, the NMFS undertook a significantly expanded research effort to assess the status of this stock.

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SPERM WHALE
(Physeter macrocephalus)

Distribution and Migration. The sperm whale is nearly worldwide in distribution except for the pack ice of the polar regions. Females and immature animals are generally found between lat. 40°S and 50°N. Sperm whales appear to migrate north during the northern summer and south during the northern winter. In the North Pacific, male sperm whales are found as far north as the Bering and Okhotsk Seas; in the North Atlantic they move into Davis Strait and near Spitzbergen.

Abundance and Trends. In 1946, the world stock of exploitable males (i.e., males over the legal length limit of 9.2 m) and sexually mature females was over 1 million, of which almost half were males. The present stock is about 700,000, of which only about one third are males. These are distributed by major ocean areas as follows (Mitchell, 1974; Chapman, 1976; International Whaling Commission, 1977):

Ocean	1946 population	Current population
North Atlantic	(22?) a/	22 a/
North Pacific	400	300
South Atlantic	120	90
Indian	220	140
South Pacific	360	180

a/ Estimate of total population, including immature animals. All figures in thousands.

The total populations of each sex, including undersized males and immature females, are approximately 2.5 times the number of exploitable males and 1.67 times the number of mature females (Gambell, 1976).

The sperm whale is currently the most important species of the world whaling industry. Stocks in most areas are at or above maximum sustainable yield levels. Catches of sperm whales in recent seasons have been:

Season	North Pacific	North Atlantic	Southern ocean pelagic a/	Southern land stations
1970	14,815	649	5,891	4,135
1971	10,890	831	7,335	4,498
1972	6,323	691	8,172	2,695
1973	8,567	613	9,394	2,652
1974	8,127	238 b/	8,930	2,891 d/
1975	7,859	37 c/	7,046	3,701 d/
1976	5,854	111 c/	4,075	1,004
1977	6,344	110	4,075	649 e/

a/ Southern ocean catches are for the seasons 1970-71 through 1975-76.
b/ No data from Azores or Madeira.
c/ No data from Azores, Madeira, or Spain.
d/ No data from Chile.
e/ No data from Peru or Chile.

In most areas, males dominate the catches, and in the Antarctic (south of lat. 40° S) the catch is almost exclusively males.

General Biology.

Species Statistics.-- The sperm whale's large squarish head is distinctive, because it bears a tanklike "case" containing spermaceti. The lower jaw is long and narrow and has about 25 pairs of teeth. Females reach 11.6 m in body length, males 16.8 m.

Reproductive Data.-- The females mature sexually about age 8 to 11 years when body length is about 8.5 to 9.1 m, physically at 25 to 30 years and body length of 11.0 m. Males are not sexually mature until about 10 years and 11.9 m, and are not "socially" mature until about age 25 years. Females and juveniles of both sexes form schools of 10 to 50 animals, averaging about 25. Younger, sexually mature males (ca. 11.0 - 13.4 m, age 15 - 15 years) form "bachelor" schools usually containing not more than 10 animals. Older males (13.7 m, 22 - 17 years) are usually solitary except when with schools of females for breeding for about 5 months in the spring and early summer. The female bears a calf (about 4.0 m) once every 3 to 5 years. Gestation lasts 14 to 15 months, and the calf nurses 1 to 2 years and is weaned at about 6.7 m long.

Age-Growth Data.-- Newborn calves are about 3.5 to 5 m, and weigh about

1,000 kg. Growth of males continues until they are 45 to 60 years old, and about 15.5 m long.

Feeding Habits.-- This species dives to at least 1,000 m, can remain submerged for about an hour, and feeds mainly on large squid. It also consumes significant quantities of octopuses and demersal and mesopelagic fishes.

Ecological Problems. None known.

Allocation Problems. None known.

Current Research. The NMFS is studying the life history of the sperm whale. Other organizations carrying out research on this species are the Japanese Whales Research Institute and Japanese Far Seas Fisheries Research Laboratory (North Pacific and Antarctic), Fisheries Research Board of Canada (North Atlantic), British National Institute of Oceanography (South Africa), Australian Commonwealth Scientific and Industrial Research Organization (Australia), the University of Chile (Chile), the Marine Institute of Peru (Peru), and the Marine Department of New Zealand (New Zealand).

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PART III - APPENDIXES

Appendix A - Tables.

Tables 1-3 - Incidental take of marine mammals/commercial fishing operations.

Tables 4-11 - Scientific research and public display permits.

Appendix B - Laws and treaties governing the protection of marine mammals.

Appendix C - Federal Register notices and regulations.

Table 1. Yellowfin Tuna and Tuna Products Importation Prohibition 1978

STATUS OF NATIONS DETERMINED TO BE OPERATING TUNA PURSE SEINERS IN THE EASTERN TROPICAL PACIFIC OCEAN (ETP)

Nation	IATTC Member	Date of Finding of Conformance with U.S. Regs.	Purse Seiners Operating in CYRA Number	Capacity 2/	Percent Capacity
Bermuda		January 26, 1978	6	2,671	3.87
Canada	X	October 27, 1977	6	4,610	6.67
Congo		September 5, 1978	2	4,002	5.79
Costa Rica		February 6, 1978	7	4,822	6.98
Ecuador		October 27, 1977	39	5,885	8.52
France 1/	X		-	-	-
Japan 1/	X		-	-	-
Mexico	X	October 27, 1977	23	13,437	19.45
Netherlands Antilles		October 27, 1977	8	9,100	13.17
New Zealand		August 16, 1978	1	1,100	1.59
Nicaragua	X	December 22, 1977	2	3,800	5.50
Panama	X	December 30, 1977	6	6,926	10.02
Peru			10	4,744	6.87
Senegal		September 5, 1978	3	2,258	3.27
Spain		September 5, 1978	4	2,698	3.91
Venezuela		July 17, 1978	3	3,032	4.39
		SUBTOTAL	120	69,085 (38.35%)	100.00
		U.S.A.	140	111,054 (61.65%)	
		TOTAL	260	180,139	

1/ Nation certified that no purse seiners operated in ETP during 1977-78. No finding needed.

2/ Carrying capacity of fleet in U.S. short tons.

Table 2.

1978 GENERAL PERMITS - COMMERCIAL FISHING INCIDENTAL TAKE[1/]

Permits		Pinnipedia				Cetacea		Total	
		Otariidae		Phocidae					
		Applied for	Permit Granted	Applied for	Permit Granted	Applied for	Permit Granted	Applied for	Permit Granted
Category 1 Towed or Dragged Gear	Domestic								
	Japan (Deep Sea)	501	500	6	6	8	8	515 (11/22/77)	514 (5/22/78)
	Japan (Medium)	500	500	3	3	3	3	506 (11/22/77)	506 (5/22/78)
	USSR (Sovrybflot)	1501	400	6	6	8	8	1515 (2/15/78)	414 (7/3/78)
	Bulgaria (S.E.E.)	8	8	8	8	8	8	24 (2/17/78)	24 (5/3/78)
	Cuba							(incomplete)	
Sub-total		2510	1408	23	23	27	27	2560	1458
Category 3 Encircling Gear, Not Involving Intentional Taking	Domestic (UFA)	800	200	800	200	90	20	1690 (1/11/78)	420 (3/28/78)
Sub-total		800	200	800	200	90	20	1690	420
Category 4 Stationary Gear	Domestic (UFA)	80	20	80	20	0	0	165 (1/11/78)[3/]	40 (3/28/78)
Sub-total		80	20	80	20	0	0	165	40
Category 5 Other Gear	Domestic	1200	300	1800	450	230	60	3230 (1/11/78)	810 (3/28/78)
	Japan (Longline)[2/]	0	0	0	0	0	0	0 (11/22/77)	0 (5/22/78)
Sub-total		1200	300	1800	450	230	60	3230	810
Total		4590	1928	2703	693	347	107	7645	2728

1/ Except Category 2; Encircling Gear, Involving the Intentional Taking of Marine Mammals.

2/ Requested harassment only, no mortality or serious injury intended.

3/ Requested take of 5 Sea Otters in addition to Pinnipeds and Cetaceans.

Table 3.

1979 GENERAL PERMITS - COMMERCIAL FISHING INCIDENTAL TAKE[1/]

	Permits	Pinnipedia Otariidae Applied for	Pinnipedia Otariidae Permit Granted	Pinnipedia Phocidae Applied for	Pinnipedia Phocidae Permit Granted	Cetacea Applied for	Cetacea Permit Granted	Total Applied for	Total Permit Granted
Category 1 Towed or Dragged Gear	Domestic (PCFFA)	500		500		0		1,000 (1/29/79)	
	Japan (Deep Sea)	65		3		0		68 (11/28/78)	
	Japan (Medium) [2/]	0		0		0		0 (11/28/78)	
	USSR (Sovrybflot)	1,501		6		8		1,515 (12/12/78)	
	Poland (Odra/Dalmor)	25		25		19		69 (2/16/79)	
	Domestic (Chipman)	10		10		0		20 (2/7/79)	
	Sub-total	2,101		544		27		2,672	
Category 3 Encircling Gear, Not Involving Intentional Taking	Domestic (PCFFA)	800		800		90		1,690 (1/29/79)	
	Domestic (Chipman)	10		10		0		20 (2/7/79)	
	Domestic (UFOSC)	800		800		90		1,690 (3/9/79)	
	Sub-total	1,610		1,610		180		3,400	
Category 4 Stationary Gear	Domestic (PCFFA)	80		80		0		160 (1/29/79)	
	Domestic (Chipman)	10		10		0		20 (2/7/79)	
	Sub-total	90		90		0		180	
Category 5 Other Gear	Domestic (PCFFA)	1,800		1,800		160		3,760 (1/29/79)	
	Japan (Longline) [2/]	0		0		0		0 (11/28/78)	
	Domestic (Chipman)	10		10		0		20 (2/7/79)	
	Domestic (UFOSC)	1,200		800		230		2,230 (3/9/79)	
	Sub-total	3,010		2,610		390		6,010	
	Total	6,811		4,854		597		12,262	

1/ Except Category 2; Encircling Gear, Involving the Intentional Taking of Marine Mammals.
2/ Requested harassment only, no mortality or serious injury intended.

Table 4

COMMON AND SCIENTIFIC NAMES OF MARINE MAMMALS INVOLVED IN SCIENTIFIC RESEARCH/PUBLIC DISPLAY PERMIT APPLICATIONS

CETACEANS

COMMON NAME	SCIENTIFIC NAME
Atlantic White-Sided Dolphin	*Lagenorhynchus acutus*
Baird's Beaked Whale	*Berardius bairdii*
Black Right Whale	*Balaena glacialis*
Blainville's Beaked Whale	*Mesoplodon densirostris*
Blue Whale	*Balaenoptera musculus*
Bottlenose Dolphins	*Tursiops* sp.
Bottlenose Whales	*Hyperoodon* sp.
Bowhead Whale	*Balaena mysticetus*
Bryde's Whale	*Balaenoptera edeni*
Common Dolphin	*Delphinus delphis*
Cuvier's Beaked Whale	*Ziphius cavirostris*
Dall Porpoise	*Phocoenoides dallii*
Dusky Dolphin	*Lagenorhynchus obscurus*
Dwarf Sperm Whale	*Kogia simus*
False Killer Whale	*Pseudorca crassidens*
Fin Whale, Finback	*Balaenoptera physalus*
Finless Porpoise	*Neophocaena phocaenoides*
Fraser's (Sarawak) Dolphin	*Lagenodelphis hosei*
Gray Whale	*Eschrichtius robustus*
Harbor Porpoise	*Phocoena phocoena*
Hubb's Beaked Whale	*Mesoplodon carlhubbsi*
Humpback Whale	*Megaptera novaeangliae*
Killer Whale	*Orcinus orca*
Lagenorhynchine Dolphins	*Lagenorhynchus* sp.
Long-Finned Pilot Whale	*Globicephala melaena*
Melon-Headed Whale, Electra	*Peponocephala electra*
Minke Whale	*Balaenoptera acutorostrata*
Northern Right Whale Dolphin	*Lissodelphis borealis*
Pacific White-Sided Dolphin	*Lagenorhynchus obliquidens*
Pilot Whales	*Globicephala* sp.
Pygmy Killer Whale	*Feresa attenuata*
Pygmy Sperm Whale	*Kogia breviceps*
Right Whales	*Balaena* sp.
Risso's Dolphin, Grampus	*Grampus griseus*
Rough-Toothed Dolphin	*Steno bredanensis*
Sei Whale	*Balaenoptera borealis*
Short-Finned Pilot Whale	*Globicephala macrorhynchus*
Southern Right Whale	*Balaena australis*
Sperm Whale	*Physeter catodon*
Spinner Dolphin	*Stenella longirostris*

Table 4 (con.)

CETACEANS

COMMON NAME	SCIENTIFIC NAME
Spotted Dolphin	*Stenella attenuata*
Stenelline Dolphins	*Stenella* sp.
Striped Dolphin, Streaker	*Stenella coeruleoalba*
Unspecified Cetacea	Cetacea
Unspecified Toothed Whales	Odontoceti
Vaquita, Cochito	*Phocoena sinus*
White Whale	*Delphinapterus leucas*
White-Beaked Dolphin	*Lagenorhynchus albirostris*

PINNIPEDS

Amsterdam Island Fur Seal	*Arctocephalus tropicalis*
Arctocephaline Fur Seals	*Arctocephalus* sp.
Baikal Seal	*Phoca sibirica*
Bearded Seal	*Erignathus barbatus*
California Sea Lion	*Zalophus californianus*
Caspian Seal	*Phoca caspica*
Crabeater Seal	*Lobodon carcinophagus*
Gray Seal	*Halichoerus grypus*
Guadalupe Fur Seal	*Arctocephalus townsendi*
Harbor Seals	*Phoca vitulina*
Harp Seal, Greenland Seal	*Phoca groenlandica*
Hawaiian Monk Seal	*Monachus schauinslandi*
Kerguelen Fur Seal	*Arctocephalus gazella*
Largha Seal, Spotted Seal	*Phoca largha*
Leopard Seal	*Hydrurga leptonyx*
Northern Elephant Seal	*Mirounga angustirostris*
Northern Fur Seal	*Callorhinus ursinus*
Northern Sea Lion	*Eumetopias jubatus*
Ribbon Seal	*Phoca fasciata*
Ringed Seal	*Phoca hispida*
Ross Seal	*Ommatophoca rossii*
South African Fur Seal	*Arctocephalus pusillus*
South American Sea Lion	*Otaria flavescens*
Southern Elephant Seal	*Mirounga leonina*
Unspecified Marine Mammals	Unspecified Marine Mammals
Unspecified Pinnipedia	Pinnipedia
Weddell Seal	*Leptonychotes weddelli*

Table 5

SYNOPSIS OF PERMIT APPLICATIONS

	Scientific Research	Public Display	Scientific and Public Display	Scientific Research	Public Display	Scientific and Public Display	Cumulative Total
	(as of March 31, 1978)			(April 1, 1978, to March 31, 1979)			
Applications Submitted	130	170	4	29	26	2	361
Animals Requested (Total)	518,279	935	169	15,927	97	101	535,508
Of These:							
Taken by Killing	16,531	0	0	1,440	0	0	17,971
Taken and Kept Alive	240	844	32	34	80	51	1,281
Kept in Captivity	49	0	0	0	0	0	49
Taken and Released	498,723	0	135	11,120	0	40	510,018
Found Dead	804	0	0	165	0	0	969
Beached/Stranded	0	42	2	54	13	0	111
Imported	1,227	49	0	54	0	10	1,340
Harassed	700	0	0	3,000	0	0	3,700
Action Taken							
Applications Forwarded to Marine Mammal Commission	103	141	3	18	10	2	277
Applications Reviewed by Marine Mammal Commission	103	138	3	18	10	2	274
Applications Withdrawn	3	14	1	1	2	0	21
Applications Referred to Fish and Wildlife	0	0	0	1	0	0	1
Applications Referred to States	12	1	0	1	0	0	14
Applications Referred to Regions	2	6	0	2	4	0	14
Applications Resolved through Interagency Agreement	1	0	0	0	2	0	3
Applications Returned Due to Insufficient or Inappropriate Submittal	2	14	0	6	9	0	31
Applications Denied	2	6	0	0	0	0	8
Applications Approved	107	125	3	16	9	2	262
Applications Pending	0	0	0	2	0	0	2
Animals Approved (Total)	517,438	606	162	15,050	39	101	533,396
Of These:							
Taken by Killing	16,486	0	0	1,015	0	0	17,501
Taken and Kept Alive	216	533	27	34	33	51	894
Killed in Captivity	49	0	0	0	0	0	49
Taken and Released	498,038	0	135	10,812	0	40	509,025
Found Dead	682	0	0	165	0	0	847
Beached/Stranded	30	31	0	24	6	0	91
Imported	1,271	42	0	0	0	10	1,271
Harrassed	718	0	0	3,000	0	0	3,718

Table 6

CETACEANS REQUESTED IN SCIENTIFIC RESEARCH/PUBLIC DISPLAY PERMIT APPLICATIONS

Common Name[a]	Requested (as of March 31, 1978) Taken by Killing	Taken and Kept Alive	Killed in Captivity	Taken and Released	Found Dead or Stranded	Requested (April 1, 1978, thru March 31, 1979) Taken by Killing	Taken and Kept Alive	Killed in Captivity	Taken and Released	Found Dead or Stranded	Cumulative Total Requested
Baird's Beaked Whale	----	----	-----	25	----	-----	----	-----	------	----	25
Black Right Whale	----	----	-----	10	----	-----	----	-----	------	----	10
Blue Whale	----	----	-----	95	----	-----	----	-----	------	----	95
Bottlenose Dolphins	70	476	-----	50,899	3	-----	69	-----	40	----	51,557
Bowhead Whale	----	----	-----	50	130	-----	----	-----	------	90	270
Bryde's Whale	----	----	-----	420	----	-----	----	-----	------	----	420
Common Dolphin	155	46	-----	75,777	3	-----	30	-----	10	----	76,021
Cuvier's Beaked Whale	----	2	-----	-------	----	-----	----	-----	------	----	2
Dall Porpoise	----	----	-----	610	3	-----	----	-----	------	----	613
Dusky Dolphin	----	----	-----	61	----	-----	----	-----	------	----	61
False Killer Whale	----	14	-----	6	----	-----	----	-----	------	----	20
Fin Whale, Finback	----	-----	-----	395	----	-----	----	-----	------	----	395
Finless Porpoise	----	6	-----	-----	----	-----	----	-----	------	----	6
Fraser's (Sarawak) Dolphin	70	----	-----	1,050	----	-----	----	-----	------	----	1,120
Gray Whale	----	----	-----	419	86	-----	----	-----	------	75	580
Harbor Porpoise	----	----	-----	100	4	-----	----	-----	------	----	104
Hubb's Beaked Whale	----	----	-----	-----	3	-----	----	-----	------	----	3
Humpback Whale	----	----	-----	140	----	-----	----	-----	------	----	140
Killer Whale	----	13	-----	85	23	-----	4	-----	------	----	125
Long-Finned Pilot Whale	----	----	-----	30	30	-----	-----	-----	------	-----	60
Melon-Headed Whale, Electra	45	4	-----	300	----	-----	-----	-----	------	-----	349
Minke Whale	----	----	-----	810	3	-----	-----	-----	------	-----	813
Northern Right Whale Dolphin	----	2	-----	130	3	-----	-----	-----	------	-----	135
Pacific White-Sided Dolphin	----	25	-----	521	3	-----	-----	-----	------	-----	549
Pilot Whales	----	4	-----	-----	----	-----	-----	-----	------	-----	4
Pygmy Killer Whale	45	8	-----	300	----	-----	-----	-----	------	-----	353
Pygmy Sperm Whale	----	----	-----	-----	3	-----	-----	-----	------	-----	3
Risso's Dolphin, Grampus	70	10	-----	1,105	----	-----	2	------	5	------	1,192
Rough-Toothed Dolphin	70	9	-----	5,050	-----	-----	-----	------	------	------	5,129
Sei Whale	----	----	-----	480	-----	-----	-----	------	-----	------	480
Short-Finned Pilot Whale	70	27	-----	135	3	-----	8	------	5	------	248
Sperm Whale	-----	----	-----	1,035	-----	-----	-----	------	-----	------	1,035
Spinner Dolphin	2,929	27	-----	103,955	-----	-----	10	------	10	------	106,931
Spotted Dolphin	4,925	10	-----	157,840	-----	-----	10	------	10	------	162,795
Stenelline Dolphins	-----	15	-----	100	3	------	15	------	-----	------	133
Striped Dolphin, Streaker	100	----	-----	50,050	-----	------	------	------	-----	------	50,150
Unspecified Cetacea	340	6	-----	1,239	-----	------	------	------	-----	-------	1,585
Vaquita, Cochito	-----	-----	-----	-----	2	------	------	------	-----	-------	2
White Whale	55	20	-----	-----	50	------	6	------	------	-------	131
White-Beaked Dolphin	-----	2	-----	-----	-----	------	------	------	------	-------	2
TOTALS:[b]	8,944	726	0	453,222[c]	355	0	154	0	80	165	463,646

[a] Plesse refer to Table 4 of this sppendix for the appropriate scientific names.
[b] Where permit applicants requested a total number of animals to be taken without specifying the number to be taken from a particular species, the number requested was listed under Unspecified Cetacea.
[c] A single application requested 432,850 cetaceans and sccounts for nearly the total number of cetaceans requested in the Taken and Released category.
d Specimen imports not included in this table.

Table 7

PINNIPEDS REQUESTED IN SCIENTIFIC RESEARCH/PUBLIC DISPLAY PERMIT APPLICATIONS

Common Name[a]	Requested (as of March 31, 1978) Taken by Killing	Taken and Kept Alive	Killed in Captivity	Taken and Released	Found Dead or Stranded	Requested (April 1, 1978, thru March 31, 1979) Taken by Killing	Taken and Kept Alive	Killed in Captivity	Taken and Relessed	Found Dead or Stranded	Cumulstive Total Requested
Arctocephaline Fur Seals	2	-----	------	80	-----	------	-----	-----	------	-----	82
Baikal Seal	-----	4	------	------	-----	------	-----	-----	------	-----	4
Bearded Seal	230	-----	------	750	10	100	-----	-----	200	-----	1,290
California Sea Lion	680	436	------	1,035	265	------	21	-----	30	21	2,488
Caspian Seal	-----	2	------	------	-----	------	-----	-----	------	-----	2
Crabeater Seal	2,628	-----	------	6,925	-----	60	-----	-----	1,500	-----	11,113
Gray Seal	-----	30	------	------	-----	------	-----	-----	------	-----	30
Harbor Seals	1,236	101	------	4,170	26	470	-----	-----	1,310	38	7,351
Harp Seal, Greenland Seal	-----	40	------	-----	-----	------	-----	-----	-----	-----	40
Hawaiian Monk Seal	-----	2	------	980	-----	------	-----	-----	128	-----	1,110
Kerguelen Fur Seal	131	-----	------	750	-----	------	-----	-----	-----	-----	881
Largha Seal, Spotted Seal	100	-----	------	-----	-----	------	-----	-----	-----	-----	100
Leopard Seal	528	8	------	1,200	-----	------	-----	-----	1,500	-----	3,236
Northern Elephant Seal	-----	13	------	9,046	281	------	-----	-----	3,712	-----	13,052
Northern Fur Seal	-----	32	------	-----	3	------	-----	-----	-----	-----	35
Northern Sea Lion	630	-----	------	12,500	3	15	-----	-----	-----	8	13,156
Ribbon Seal	230	-----	------	100	-----	100	-----	-----	-----	-----	430
Ringed Seal	260	8	------	1,254	25	450	-----	-----	-----	-----	1,997
Ross Seal	258	6	------	585	-----	15	-----	-----	300	-----	1,164
South African Fur Seal	-----	6	------	10	-----	------	-----	-----	-----	-----	16
South American Sea Lion	-----	9	------	-----	-----	------	-----	-----	-----	-----	9
Southern Elephant Seal	133	-----	------	260	-----	------	-----	-----	-----	-----	393
Unspecified Marine Mammals	-----	-----	------	-----	50	------	-----	-----	-----	-----	50
Unspecified Pinnipedia	-----	-----	12	-----	-----	------	-----	-----	-----	-----	12
Weddell Seal	541	25	37	6,071	-----	30	-----	-----	2,400	-----	9,104
West Indian Manatee	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	1
	7,587	723	49	45,716	663	1,240	21	0	11,080	67	67,146

[a] Please refer to Table 4 of this appendix for the sppropriste scientific names.
[b] Where permit applicants requested a total number of animals to be taken without specifying the number to be taken from a particular species, the number requested was listed under Unspecified Pinnipeds or Unspecified Marine Mammals, if cetacesns also were involved.
[c] Specimen imports not included in this table.

Table 8

CETACEANS AUTHORIZED IN SCIENTIFIC RESEARCH/PUBLIC DISPLAY PERMIT APPLICATIONS

Common Name[a]	Authorized (as of March 31, 1978) Taken by Killing	Taken and Kept Alive	Killed in Captivity	Taken and Released	Found Dead or Stranded	Authorized (April 1, 1978 thru March 31, 1979) Taken by Killing	Taken and Kept Alive	Killed in Captivity	Taken and Released	Found Dead or Stranded	Cumulative Total Authorized
Atlantic White-Sided Dolphin	-----	-----	------	5	------	------	------	------	------	-----	5
Black Right Whale	-----	-----	------	10	------	------	------	------	------	-----	10
Blue Whale	-----	-----	------	70	------	------	------	------	------	-----	70
Bottlenose Dolphins	70	292	------	50,864	------	------	40	------	40	------	51,306
Bowhead Whale	-----	-----	------	50	40	------	------	------	------	------	90
Bryde's Whale	-----	-----	------	410	------	------	------	------	------	------	410
Common Dolphin	155	8	------	75,767	------	------	30	------	10	------	75,970
Dall Porpoise	-----	-----	------	610	------	------	------	------	------	------	610
Dusky Dolphin	-----	-----	------	61	------	------	------	------	------	------	61
False Killer Whale	-----	12	------	6	------	------	------	------	------	------	18
Fin Whale, Finback	-----	-----	------	370	------	------	------	------	------	------	370
Fraser's (Sarawak) Dolphin	70	-----	------	1,050	------	------	------	------	------	-------	1,120
Gray Whale	-----	-----	------	419	10	------	------	------	------	-------	429
Harbor Porpoise	-----	-----	------	105	1	------	------	------	------	-------	106
Humpback Whale	-----	-----	------	100	------	------	------	------	------	-------	100
Killer Whale	-----	4	------	85	------	------	4	------	------	-------	93
Long-Finned Pilot Whale	-----	-----	------	30	30	------	------	------	------	-------	60
Melon-Headed Whale, Electra	45	4	------	300	------	------	------	------	------	-------	349
Minke Whale	-----	-----	------	800	------	------	------	------	------	-------	800
Northern Right Whale Dolphin	-----	-----	------	130	------	------	------	------	------	-------	130
Pacific White-Sided Dolphin	-----	17	------	521	------	------	------	------	------	-------	538
Pygmy Killer Whale	45	4	------	300	------	------	------	------	------	-------	349
Risso's Dolphin, Grampus	70	6	------	1,100	------	------	2	------	5	-------	1,183
Rough-Toothed Dolphin	70	9	------	5,050	------	------	------	------	------	-------	5,129
Sei Whale	-----	-----	------	470	------	------	------	------	------	-------	470
Short-Finned Pilot Whale	70	16	------	130	------	------	8	------	5	-------	229
Sperm Whale	-----	-----	------	860	------	------	------	------	------	-------	860
Spinner Dolphin	2,929	11	------	103,945	------	------	10	------	10	-------	106,905
Spotted Dolphin	4,925	-----	------	157,830	------	------	10	------	10	-------	162,775
Stenelline Dolphins	-----	-----	------	100	------	------	15	------	------	-------	115
Striped Dolphin, Streaker	100	-----	------	50,050	------	------	------	------	------	-------	50,150
Unspecified Cetacea	340	6	------	914	------	------	------	------	------	-------	1,260
Vaquita, Cochito	-----	-----	------	-----	2	------	------	------	------	-------	2
White Whale	15	14	------	-----	50	------	6	------	------	-------	85
White-Beaked Dolphin	-----	2	------	-----	------	------	------	------	------	-------	2
TOTALS:[b]	8,904	405	0	452,512[c]	133	0	125	0	80	0	462,159

a Please refer to Table 4 of this appendix for the appropriate scientific names.

b Where a permit specified the total number of animals to be taken without specifying the number to be taken from a particular species, the number authorized was listed under Unspecified Cetacea.

c A single permit authorized 432,850 cetaceans and accounts for nearly the total number authorized in the Taken and Released category.

d Specimen imports not included in this table.

Table 9

PINNIPEDS AUTHORIZED IN SCIENTIFIC RESEARCH/PUBLIC DISPLAY PERMIT APPLICATIONS

Common Name[a]	Authorized (as of March 31, 1978) Taken by Killing	Taken and Kept Alive	Killed in Captivity	Taken and Released	Found Dead or Stranded	Authorized (April 1, 1978, thru March 31, 1979) Taken by Killing	Taken and Kept Alive	Killed in Captivity	Taken and Released	Found Dead or Stranded	Cumulative Total Authorized
Arctocephaline Fur Seals	2	-----	------	80	----	-------	-----	------	------	-----	82
Baikal Seal	-----	4	------	-------	----	-------		------	------	-----	4
Bearded Seal	230	-----	------	750	10	100	-----	------	200	-----	1,290
California Sea Lion	680	311	------	1,035	251		-----	------	------	-----	2,277
Caspian Seal	-----	2	------	------	----	-------	-----	------	------	-----	2
Crabeater Seal	2,628	-----	------	6,925	----	60	-----	------	1,500	-----	11,113
Gray Seal	----	24	------	5	----	-------	-----	------	------	-----	29
Harbor Seals	1,216	74	------	4,095	21	200	-----	------	40	-----	5,646
Harp Seal, Greenland Seal	-----	40	------	-----	----	------	-----	------	------	-----	40
Hawaiian Monk Seal	-----	-----	------	980	-----	------	-----	------	120	-----	1,100
Kerguelen Fur Seal	131	-----	------	750	-----	------	-----	------	------	-----	881
Largha Seal, Spotted Seal	100	-----	------	-----	-----	------	-----	------	------	-----	100
Leopard Seal	528	8	------	1,200	-----	60	-----	------	1,500	-----	3,296
Northern Elephant Seal	-----	6	------	9,046	278	------	-----	------	12	-----	9,342
Northern Fur Seal	-----	20	------	-----	-----	------	-----	------	------	-----	20
Northern Sea Lion	630	-----	------	12,500	-----	------	-----	------	------	-----	13,130
Ribbon Seal	230	-----	------	100	-----	100	-----	------	------	-----	430
Ringed Seal	260	8	------	1,254	25	450	-----	------	------	-----	1,997
Ross Seal	258	6	------	585	-----	15	-----	------	300	-----	1,164
South African Fur Seal	-----	-----	------	10	-----	------	-----	------	------	-----	10
South American Sea Lion	-----	9	------	-----	-----	------	------	------	------	-----	9
Southern Elephant Seal	133	-----	------	260	-----	------	------	------	------	-----	393
Unspecified Marine Mammals	15	-----	------	15	-----	------	------	------	------	-----	30
Unspecified Pinnipedia	-----	-----	12	-----	25	------	------	------	------	------	37
Weddell Seal	541	25	37	6,071	-----	30	------	------	2,400	------	9,104
TOTALS:[b]	7,582	537	49	45,661	610	1,015	0	0	6,072	0	61,526

[a] Please refer to Table 4 of this appendix for the appropriate scientific names.

[b] Where a permit specified the total number of animals to be taken without specifying the number to be taken from a particular species, the number authorized was listed under Unspecified Pinnipeds or Unspecified Marine Mammals if cetaceans were also involved.

[c] Specimen imports not included in this table.

Table 10

SUMMARY OF PERMITS FOR PERMANENT REMOVAL FROM THE WILD - CETACEANS

Species[a]	Permits			Number of Animals					
	Issued	Expired	Current	Requested	Authorized	Replacements	Authorization Expired	Taken	Take Remaining
Bottlenose Dolphins	57	32	25	416	402	6	237	14	157
Common Dolphin	7	4	3	201	193	3	150	28	18
False Killer Whale	4	0	4	12	12	0	0	1	11
Fraser's (Sarawak) Dolphin	2	2	0	70	70	0	70	0	0
Melon-Headed Whale, Electra	3	2	1	49	49	0	45	2	2
Pacific White-Sided Dolphin	4	2	2	17	17	0	2	3	12
Pygmy Killer Whale	3	2	1	49	49	0	45	0	4
Risso's Dolphin, Grampus	4	2	2	78	78	0	70	1	7
Rough-Toothed Dolphin	5	3	2	79	79	2	72	4	5
Short-Finned Pilot Whale	11	8	3	95	94	3	80	8	9
Spinner Dolphin	4	2	2	2,956	2,950	3	2,790	167	0
Spotted Dolphin	3	2	1	4,935	4,935	0	4,712	238	0
Stenelline Dolphins	1	0	1	15	15	0	0	17	0
Striped Dolphin, Streaker	1	1	0	100	100	0	100	0	0
Unspecified Cetacea	2	2	0	346	346	0	332	14	0
White Whale	1	0	1	15	15	0	0	1	14
TOTALS:[b]	112	64	48	9,433	9,404	17	8,705	498	218

[a] Please refer to Table 4 of this appendix for the appropriate scientific names.

[b] Several permits were issued for the permanent removal of more than one species. Therefore, the number of permits issued for each species is accurate, but the total number issued, expired, and current includes these duplications.

Table 11

SUMMARY OF PERMITS FOR PERMANENT REMOVAL FROM THE WILD - PINNIPEDS

Species[a]	Permits Issued	Permits Expired	Permits Current	Number of Animals Requested	Number of Animals Authorized	Replacements	Authorizations Expired	Taken	Take Remaining
Arctocephaline Fur Seals	1	1	0	2	2	0	22	0	0
Bearded Seal	4	1	3	230	230	0	10	26	194
California Sea Lion	70	52	18	1,004	991	7	49	216	733
Crabeater Seal	4	2	2	2,688	2,688	0	2,052	8	628
Harbor Seals	27	16	11	1,362	1,346	0	407	34	905
Kerguelen Fur Seal	2	1	1	131	131	0	81	0	50
Largha Seal, Spotted Seal	1	0	1	100	100	0	0	0	100
Leopard Seal	4	2	2	588	588	0	228	18	342
Northern Fur Seal	2	1	1	20	20	0	0	10	10
Northern Sea Lion	5	1	4	630	630	0	10	216	404
Ribbon Seal	5	2	3	330	330	0	110	19	201
Ringed Seal	6	2	4	710	710	0	386	73	251
Ross Seal	5	2	3	279	279	0	93	1	185
Southern Elephant Seal	3	2	1	133	133	0	93	0	40
Unspecified Marine Mammals	1	0	1	0	15	0	0	4	11
Unspecified Pinnipedia	1	1	0	12	12	3	15	0	0
Weddell Seal	6	3	3	633	633	0	3,441	8	0
TOTALS[b]	147	89	58	8,852	8,838	10	6,997	633	4,054

[a] Please refer to Table 4 of this appendix for the appropriate scientific names.

[b] Several permits were issued for the permanent removal of more than one species. Therefore, the number of permits issued for each species is accurate, but the total number issued, expired, and current includes these duplications.

Appendix B

Laws and Treaties Governing the Protection of Marine Mammals

Every marine mammal of U.S. concern is protected by one or more U.S. laws or acts, and the conservation of some species is partially assured by international treaty or law. A summary of laws, conventions, and commissions designed to protect marine mammals follows.

United States Laws and Treaties

1. Marine Mammal Protection Act of 1972: A U.S. Federal law that prohibits persons under the jurisdiction of the United States from taking, harassing, or importing any marine mammal or its byproducts into the United States, except when authorized to do so by special permit. Eskimos, Aleuts, and Indians of the North Pacific and Arctic Oceans can take marine mammals for subsistence and for creating and selling handicraft items and clothing as long as the stocks can support the harvest.

2. Endangered Species Act of 1973: The purpose of this U.S. Federal law is to provide a program for the conservation of species that are either endangered now or threatened with extinction within the foreseeable future and their dependent ecosystems, and to implement international conservation conventions. With limited exceptions, the Act prohibits the taking, importing, exporting, and interstate commerce of any endangered species, as well as their parts or products. Exceptions include: permits for scientific purposes or the enhancement of propagation or survival of the species, economic hardship exemptions, and subsistence taking by Alaska natives. For threatened species, the Act authorizes the issuance of protective regulations as necessary for their conservation. Furthermore, to assist in accomplishing its purposes, the Act authorizes the acquisition of land; authorizes cooperative agreements with States which have an adequate conservation program, including Federal funding of up to two-thirds (or three-fourths when entered with more than one State); prohibits Federal agencies from taking any action that would jeopardize the continued existence of an endangered or threatened species or result in the destruction or modification of its critical habitat unless an exception is granted by the Endangered Species Committee; requires the development of recovery plans; and provides for civil and criminal penalties. Marine mammals under the jurisdiction of NMFS and listed as endangered species are the blue whale, bowhead whale, fin whale, gray whale, humpback whale, right whales, sei whale, sperm whale, Caribbean monk seal, Hawaiian monk seal, and Mediterranean monk seal.

3. Convention on International Trade in Endangered Species of Wild Fauna and Flora: This Convention, which entered into force on July 1, 1975, provides additional protection for the following marine mammals under the jurisdiction of NMFS: Appendix I--blue whale, bowhead whale, gray whale, humpback whale, right whales, certain stocks of fin and sei whales, Ganges River dolphin, Caribbean monk seal, Hawaiian monk seal, Mediterranean monk seal, and northern elephant seal; Appendix II--certain stocks of fin and sei whales, southern elephant seal, Amsterdam Island fur seal, Galapagos fur seal, Guadalupe fur seal, Juan Fernandez fur seal, Kerguelen fur seal, New Zealand fur seal, Southern (South American) fur seal, and South African fur seal. Trade is more strictly controlled for Appendix I animals than for Appendix II animals. The U.S. Management Authority for the Convention (U.S. Department of the Interior) controls the import, export, re-export, and introduction from the sea of convention animals through a system of permits and enforcement. Implementation by regulating commerce began May 23, 1977.

4. International Whaling Convention: The IWC was established under a convention signed in Washington, D.C., in December 1946. The membership includes all countries that catch significant numbers of whales except Chile, Peru, Portugal, and Spain. The IWC is responsible for whale conservation worldwide. Since 1964, the IWC has acted to bring world whaling under control by prohibiting the taking of some species, sharply reducing the authorized catches of species in certain areas, establishing catch quotas by species and stocks, and implementing an international observer plan for checking compliance with quotas and regulations at land stations and on factoryships. The IWC now regulates the harvest of Bryde's, fin, minke, sei, and sperm whales. An IWC subcommittee has been established to review problems relating to cetaceans. The blue, bowhead, gray, humpback, and right whales are completely protected, except for some hunting by aborigines.

5. Whaling Convention Act of 1949 brought into force the International Convention for the Regulation of Whaling signed on December 2, 1946, by the United States and certain other governments. Article III of the International Convention established the IWC.

6. The Whale Conservation and Protection Study Act of 1976: The Act requires the Secretary of Commerce to make a comprehensive study of all whales found in waters subject to the jurisdiction of the United States, including the 200-mile fishery conservation zone. A report that includes suggested recommendations and legislation is due to Congress January 1, 1980.

7. Interim Convention on North Pacific Fur Seals: This convention, ratified in 1957, prohibits most citizens of Canada, Japan, the U.S.S.R., and United States from taking northern fur seals. The

exceptions are aboriginal Eskimos, Aleuts, and Indians, who may take them only at sea and by primitive methods. The convention also provides for intensive research on this species by the four countries. The United States and U.S.S.R. commercially harvest northern fur seals on their breeding grounds and regulate the kills on a scientific basis.

8. Fur Seal Act of 1966 brought into force the Interim Convention on North Pacific Fur Seals.

9. International Convention for the Conservation of Antarctic Seals, 1972: The purpose of this convention is to safeguard all species of Antarctic seals and to ensure that, if commercial sealing begins on floating ice of the Southern Ocean, the taking of any species will be subject to strict limitations to prevent overexploitation or damage to their ecosystem. Measures adopted under the Antarctic Treaty of 1959 provide only for the protection of seals and other animals around the shoreline of the Antarctic Continent, but not on floating ice. The convention of 1972 may be applicable to crabeater, leopard, Ross, southern elephant, southern fur seals, and Weddell seals south of latitude 60°. The Ross, southern elephant, and southern fur seals are protected species, and no taking is permitted.

Miscellaneous Regulations and Agreements of U.S. Interest

1. International Convention for the Northwest Atlantic Fisheries: Under terms of a convention signed in 1949, ICNAF is responsible for the investigation, protection, and conservation of the fisheries of the Northwest Atlantic in order to make possible the maintenance of a maximum sustained catch from these fisheries. On January 1, 1977, Canada extended its jurisdiction over fisheries to 200 miles. To avoid conflicts in 1977 between Canadian and international regulations, Canada agreed to adopt ICNAF regulations for the 1978 harvest of harp seals and hooded seals.

   An amendment to the ICNAF Convention adopted in December 1976 allows the Commission to give scientific advice for management of fisheries within natural fishery limits if requested by a coastal state that is a party to the Convention. In 1977, Canada requested and received from ICNAF a scientific report on harp and hooded seals.

   Following national and international consultations, Canada issued regulations and catch levels for 1978. The total allowable catch for the entire northwest Atlantic was set at 180,000 harp seals; Canada's share was 135,000 with 35,000 for Norway and 10,000 for Greenland, the Canadian Arctic, and Labrador. Canada appears to have completed the transition from international to Canadian management of harp and hooded seals within the limits of Canadian fisheries jurisdiction. The United States withdrew from the ICNAF in December 1976.

2. Canadian-Norwegian Agreement on Sealing: On December 22, 1971, these two governments ratified an agreement on sealing and the conservation of seal stocks in the Northwest Atlantic. The agreement applies to the harp seal, but provision is made for extension to hooded and bearded seals and to the walrus.

3. Harp Seal: The U.S.S.R. and Norway signed an agreement in 1958 entitled "Preservation of Seals in the Greenland Sea." The agreement provides for the regulation of harp seal catches by these two nations. The U.S.S.R., however, has not hunted harp seals since 1965.

4. Gray Seal: The U.S.S.R. has prohibited (since 1970) the hunting of gray seals for sport and by amateurs, but permits the taking of these animals for subsistence. Canada uses an 1886 law for authority in regulating the take of gray seals. England has prohibited the hunting of gray seals on the Farne Islands since 1932 and on Orkney Island since 1923. Norway has forbidden hunting at Sør Trondelag since 1923. Finland and Sweden offer bonuses for gray seals taken.

5. Hooded Seal: Canada and Norway prohibit the taking of hooded seals near Newfoundland before March 10, near Jan Mayen Island before March 13, in Denmark Strait from June 15 to July 15, and in northern waters from March 20 to May 5. The U.S.S.R. and Norway in 1958 agreed to prohibit the harvest of hooded seals near Jan Mayen Island before March 13 and banned hunting in Denmark Strait.

6. U.S.S.R. regulations (from the Russian publication, "Rules for Protecting and Harvesting Marine Mammals," July 11, 1975:
   a. Under these regulations, a series of protective and conservation measures were adopted. Sport and hobby (recreational) hunting of any marine mammal is prohibited everywhere and throughout the year. Rookeries and hauling grounds are protected. Capture by use of poisons, certain firearms, and hook and line gear is prohibited at sea as well as fishing or harassment by vessels or aircraft within certain distances of various islands inhabited by marine mammals. The regulations include other prohibitions designed to protect marine mammals and their ecosystems.

   b. The U.S.S.R. has established stringent closed seasons on vessel and shore harvest of ribbon, ringed, and harbor seals (and the ice-dwelling form of the harbor seal, the largha seal). The regulations allow short periods of harvest of white coats, yearlings, and adults in the Okhotsk and Bering Seas. Short harvest periods are allowed in the northern commercial areas

(White, Barents, and eastern Arctic sea areas) on harp, hooded, and ringed seals. The harvests in the Jan Mayen area are adjusted by international agreement. Taking of bearded seals and belukhas (white whales) is allowed in Arctic areas primarily for subsistence purposes.

7. Walrus: In 1958, the U.S.S.R. and Norway agreed to ban the hunting of walrus except to satisfy the needs of local groups and expeditions.

8. Guadalupe fur seal: Mexico has safeguarded the breeding grounds of the Guadalupe fur seal on the Guadalupe Islands by making this island a wildlife refuge.

9. South American fur seal: The Uruguayan and Argentinian Governments protect the South American fur seal on land and out to 200 miles at sea. The Uruguayan Government also regulates the harvest by protecting all female seals except the 1-year-olds, controlling take of pups by seasonal restrictions, and imposing quotas in some instances.

10. South African fur seal: The harvest of South African fur seals is largely a state enterprise in South Africa; however, the system includes one of control and leasing of rookeries to private contractors. The South West African Administration has not entered the harvesting business, but licenses private firms, restricts gear to be used, establishes closed seasons, and places limits on sex and condition of catch.

11. Narwhal: Canada allows Eskimos to take five narwhals annually for personal use and issues permits to capture this mammal for exhibition.

12. Killer whale: Canada allows this species to be taken under a permit system.

Appendix C

Notices and Regulations

Final rules and regulations are reprinted each year in the Code of Federal Regulations (CFR). Copies of the following rules, regulations, and notices published in the FEDERAL REGISTER are available from the Marine Mammal Division, National Marine Fisheries Service, Washington, D.C. 20235.

1. Notices and regulations relating to the bowhead whale.

43 FR 13883 (April 3, 1978) - Final rule: taking of bowhead whales by Indians, Aleuts, or Eskimos for subsistence purposes.

43 FR 22213 (May 24, 1978) - Final rule: village-by-village allocation of bowhead whales that may be taken by native (Indian, Aleut, or Eskimo) subsistence whalers during 1978.

43 FR 38609 (August 29, 1978) - Proposed amendment increasing by two the 1978 allocation of bowhead whales that may be taken by native (Indian, Aleut, or Eskimo) subsistence whalers.

43 FR 43025 (September 22, 1978) - Final rule: increase by two of 1978 allocation of bowhead whales that may be taken by native (Indian, Aleut, or Eskimo) subsistence whalers.

43 FR 43309 (September 25, 1978) - Final rule: Amendment to Schedule of the International Convention for the Regulation of Whaling, 1946. (see 43 FR 13883, 22213, 38609, 43025, 47528.)

43 FR 47528 (October 16, 1978) - Final rule: recent amendments to Schedule of the International Whaling Convention for Regulation of Whaling. (see 43 FR 13883, 22213, 38609, 43025, 43309.)

43 FR 5916 (January 30, 1979) - Proposed rules to implement 1979 management program establishing a quota for taking Bering Sea stock of bowhead whales by native (Indian, Aleut, or Eskimo) subsistence whalers of 18 landed or 27 struck, whichever occurs first. (see 44 FR 9608.)

2. Notices and regulations relating to the incidental taking of marine mammals in the course of commercial fishing operations.

43 FR 28502 (June 30, 1978) - Notice of prohibition of take of northern stock of common dolphin incidental to commercial fishing operations; 1978 quota exceeded.

43 FR 31145 (July 20, 1978) - Final rule: Venezuela is in substantial conformance with U.S. regulations governing the taking of marine mammals incidental to yellowfin tuna purse seine fishing operations; exempts yellowfin tuna caught by Venezuelan flag vessels from importation prohibition.

43 FR 36263 (August 16, 1978) - Determination that New Zealand is in substantial conformance with U.S. regulations governing the taking of marine mammals incidental to yellowfin tuna purse seine fishing operations; exempts yellowfin tuna caught by New Zealand flag vessels from importation prohibition.

43 FR 46975 (October 12, 1978) - Prohibition of take incidental to commercial fishing operations in 1978 of northern stock of striped dolphin; 1978 quota exceeded.

3. Notices and regulations relating to state management of marine mammals.

44 FR 2547 (January 11, 1979) - Determination of Alaska waiver request regarding regulations governing the taking of certain Alaska marine mammals. (see 41 FR 15166, 15173.)

4. Notices and regulations relating to humpback whales.

43 FR 25349 (June 12, 1978) - Notice of public hearing to solicit information and comments for need for regulations to control activities in areas of special significance for humpback whales in Hawaii.

44 FR 1113 (January 4, 1979) - Definition of activities that will be presumed to constitute harassment of humpback whales under the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973 in waters adjacent to the islands of the State of Hawaii. (see 43 FR 25349.)

5. Miscellaneous notices and regulations.

44 FR 7777 (February 7, 1979) - Proposed regulations for endangered species exemptions.

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